



Agriculture is the most healthy, the most useful, and the most noble employment of man.—WASHINGTON.

VOL. IX. NEW YORK, AUGUST, 1850. NO. VIII.

A. B. ALLEN & R. L. ALLEN, Editors.

C. M. SAXTON & E. BLANCHARD, Publishers.

THE
AMERICAN AGRICULTURIST
AND
FARMERS' CABINET.

PUBLISHED ON THE FIRST OF EVERY MONTH

BY

C. M. SAXTON & E. BLANCHARD, 120 FULTON ST. N. Y.

JOSIAH TATUM, 50 NORTH FOURTH ST., PHILA.

J. C. BUTTERS, 19 STATE ST., BOSTON.

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CAPACITY OF SOILS FOR ABSORBING FERTILISING MATTER.

THE property of earths for absorbing the pungent gases and offensive matter in fœtid water, shows most conclusively their capacity for absorbing and retaining the fertilising ingredients mixed with them. Anything which is undergoing decomposition, or giving off putrid odors, is immediately rendered innocuous by placing a thick covering of earth over it. The stench from a polecat, the smoke of brimstone, or a decaying carcass, is immediately absorbed and rendered imperceptible, when brought into close contact with the earth. It is in fact, the grand deodoriser of nature; and in this capacity, it is doubly beneficial to the human race, and to the herds and flocks subsisting upon its surface; first, by absorbing all these pestilential effluvia; and second, by turning them to the best account in her laboratory. In consequence of the addition of these, she gives increased luxuriance to vegetable, and fuller development and maturity to the seeds and crops that contribute to the support of innumerable races of animated creation. By the aid of these, she is enabled to lend a more unsullied white to the lily, and to add a deeper blush to the rose; and from them, too, she stores within the petals and calyx of every flower, the nectar that feeds the bee, the humming bird, and a countless throng besides. When, therefore, Abraham said to the sons of Heth, "give me a possession of a burying place, that I may bury my dead out of my sight;" and again, when the Israelites were required to carry a paddle when going without the camp, they acted only in accordance with the very best practices of modern agriculture.

But the earths possess this property in very different degrees. Silicious sands and gravels, have only the slightest hold upon foreign matter; while clays, and clayey loams seize upon them, almost with the avidity of charcoal, or animal black, and retain them with a still firmer hold, when they have once entered into a chemical union. If, however, alkaline substances, as lime, magnesia, soda, or ashes be added to the silicious earths, or if they become enriched by the addition of vegetable manures, their absorbing capacity is immediately and largely augmented. This is one of those beneficial results, always necessarily attached to good husbandry, which is fully exemplified, in the vantage ground, voluntarily conceded by his lord, in the gift of an additional pound, to the thrifty servant, whose "one pound has gained ten pounds." The soil that is in the best condition as to fertility and tilth, is in the very best possible state, also, to draw in and retain the floating elements of fertility, existing in the atmosphere.

To show some of the striking effects of the properties in soils, above alluded to, we subjoin some of the experiments and remarks of Professor Way on this subject. He passed through a filtering jar containing more than 9 inches depth of fine white sand, a quantity of cow's urine taken from a tank in the country. The liquid was so far altered by the filtration

that the turbidity was removed, as it would be by filtration through paper, but the color and disgusting smell remained in all its intensity. Sand, therefore, obviously was not the active ingredient in soils in respect to the power under discussion. The same must be said of the different forms of gravel, which were only coarse sand. The other great ingredient of soils was clay, and to this Mr. Way attributed the power in question. As an experiment, comparative with the last, he would pass the same tank water through sand, mixed with one fourth of its weight of white clay, in powder, and they would observe the result was very striking. The liquid coming through was clear and free from smell; indeed, it was hardly to be distinguished by its external characteristics from ordinary water. There could be no doubt, then, that the property of soils to remove coloring matter, and organic matter yielding smell from solution, was due to the clay contained in them. Filtration was only a method of exposing the liquid in the most perfect form to the action of the clay, but it was not necessary to the success of the process. In proof of this, Mr. Way stirred up a quantity of soil with putrid human urine, the smell of which was entirely destroyed by the admixture, and upon the subsidence of the earth the liquid was left clear and colorless. It appeared, therefore, that the clay of soils had the property of separating certain animal and vegetable ingredients from solution, but was this property the only one exhibited? Mr. Way had found that soils had the power of stopping, also, the alkalies, ammonia, potash, soda, magnesia, &c. If a quantity of ammonia, highly pungent to the smell, was thrown upon a filter of soil, or clay made permeable by sand, the water first coming away was absolutely free from ammonia. Such was the case also with the caustic or carbonated alkalies, potash, or soda. A power, he remarked, is here found to reside in soils, by virtue of which not only is rain unable to wash out of them those soluble ingredients forming a necessary condition of vegetation, but even those compounds, when introduced artificially by manure, are laid hold of and fixed in the soil, to the absolute preclusion of any loss either by rain or evaporation.

But he had found that this property of clay did not apply only to the alkalies and their carbonates, but to all the salts of these bases with whatever acid they were combined. Here again was a beautiful provision; sulphate of ammonia, when filtered through a soil, left its ammonia behind, but the sulphuric acid was found in the filtered liquid—not, however, in the free state, but combined with lime, thus sulphate of lime was produced, and brought away in the water. In the same way muriate of ammonia left its ammonia with the soil, its acid coming through in combination with lime, as muriate of that base. The same was true of all the salts of the different alkalies, so far as he had yet tried them. Thus lime, in the economy of nature, was destined to one other great office besides those which had already been found for

it—it was the means by which the salts ministering to vegetation became localised and distributed through the soil, and retained there until they are required for vegetation. It was necessary that when the alkali of a salt is laid hold of by a soil, some provision should exist for the neutralisation of the acid with which it was combined; for all other sorts, lime performed this usual office, but it had nothing to fall back upon for its own salts. Sulphate, muriate, or nitrate of lime, when passed through a soil, would come through unchanged. This, however, did not extend to lime, itself, nor to its carbonate, when dissolved in carbonic acid, as it is found in most waters. Quicklime, when dissolved in water, is removed by passing the water through most soils containing clay; and carbonate of lime, in solution, is so effectually removed that hard water may be softened by the same process.

It was not to be supposed that we could go on filtering indefinitely with the separation of the salts contained in the liquid. On the contrary, the limit was soon reached; but although small in per-centage quantity, the power was in reference to the soil enormously great. He had found that a pure clay would absorb, perhaps, two tenths per cent. of its weight of ammonia—that is to say, 1,000 grains would separate 2 grains of ammonia; and from reasons which need not then be noticed, a loam, or a well-cultivated clay soil would absorb nearly twice as much. Now every inch in depth of soil over an acre of ground weighed about 100 tons. Consequently 10 inches of depth of such soil would weigh 1,000 tons, and would be adequate to combine with and retain 2 tons of ammonia, a quantity which would be furnished by about 12 tons of guano. Now one sixtieth of this power would suffice for the preservation of the ammonia of an outside dose of guano, consequently he was justified in saying that the property was practically of immense activity.

Obviously, if there was a provision in the soil for the retention of the salts of manure, and for the ammonia and other products of the decomposition of animal and vegetable matter, the soil was the proper place for those decompositions to go on, and no matter how remote the period when the crop would be taken, it would be perfectly safe to get the manure into the land as soon as practicable after its production. Again, the equable distribution was a point, also, which seemed of considerable importance; for, if it was an absolute necessity that a new class of compounds was found in the soil as soon as the manure reached it, it seemed to follow that those compounds furnished the elements of nutrition to plants; consequently we should seek to produce them by every means in our power. Liquid manuring, wherever practicable, was an effectual way of securing this distribution. In the case of artificial manures, that is to say, manures composed of chemical salts, much simplicity was introduced by the new discovery. Henceforth we must regard the different salts, (those of ammonia, for instance,) as of value in relation to the price of ammonia, or other bases

contained in them, since they are all alike when incorporated with the soil.

In liquid manuring it had been usual to think that the application must be made to grass, or to land bearing some crop; but now that it was known that the land, not the plant, retains the manure, no theoretical difficulty could arise in the use of liquid manure for arable land.

FOOD OF CALVES.

Food of an inferior quality, or a limited supply of the better kinds, will not rear and fatten animals in number, nor of an improved organisation—the growth is stunted, the maturity is deferred, and the carcass is faulty in every respect of quantity and quality. The very first existence of the animal is rendered nugatory by the feeding of the calf from the pail, with the milk, instead of suckling, and by the substitution of broths and juicy preparations for the nutriment of the dam [?]. These insufficient materials spoil the animals at the very first outset—the intestinal offals are enlarged, the growth is stopped, and also the acquisition of the stamina of organic vigor, which forms the very first property in the value of animal life. Without constitutional vigor, the organic functions are unable to perform their offices, and the food of the very best quality is not properly decomposed and assimilated.

Every experience shows that no substances yet known will nurse a young calf so well as the mother's milk; and the quantity of saliva is wanting which is engendered by the mouth sucking the teat, and which is so very useful in promoting the action of the stomach. The suckling of the calf forms the foundation of the future animal. For the purpose of making butter and cheese it only remains to allot a portion of the cows for that purpose, and the others for suckling, each purpose being kept separate and distinct, without the hurtful intermixture of starving the animal to procure the other products of milk. Each purpose must be free of the other.—*Agricultural Gazette*.

EVERYTHING SHOULD BE DONE SYSTEMATICALLY.—It is astonishing how much time and labor are thrown away by some farmers solely for want of a system. They go to work just as it happens, in a wrong time, perhaps, and in great haste, half do the work, or leave it unfinished, and then suffer the consequences. There is another thing very reprehensible; and that is, leaving everything where it was last used, and when it is wanted for use again, some time must be spent in finding it, to say nothing of the injury done to the implements by leaving them all the time exposed to the weather. "A place for everything and everything in its place," is the true doctrine for farmers.

A DISINFECTING AGENT.—Mix four parts of dry, ground plaster of Paris with one part of fine charcoal, by weight, and sow them around the premises affected with any unpleasant odor, arising from decayed animal matter, and the gases producing the odor will directly be absorbed.

INSECTS USEFUL TO AGRICULTURE.

WE condense, principally from a recent work of J. H. Fennell, some interesting facts relating to this much-neglected class of animated nature. Were the habits, economy, and capabilities of this large, but unpretending family, fully known, mankind would be able, annually, to add millions to their products, or save hundreds of millions from their ravages; and we can offer no better suggestion to some young students of nature, some modern Linnæus, than a thorough explanation of the insect history of this broad American continent, hitherto almost wholly unknown.

Some of the Chinese silkworms spin white silk, but some regard them as only a variety of the common species, and not as a distinct one. They slightly differ from the common silkworm by a blackish spot on each side of the head; and the moths, which began to appear at the close of August, were perhaps rather larger, and the dark lines on the wings were of a little deeper color. From the hatching of the egg to the death of the moth, this variety's existence averaged 100 days. The silk was not so abundant as on the cocoon of the common sort; of not quite so strong a texture; less easily wound off; but as the silk is beautifully soft and perfectly white, further careful observation may show that it is better adapted to some purposes in manufacture than the pale-yellow and orange sorts of silk*.

The caterpillars of the Atlas moth, (*Attacus atlas*, Germar,) a native of Surinam and other parts of America, and also of China and other parts of Asia, feed on the leaves of the citrus, and spin silken cocoons of great size, which sometimes unwind in threads of many ells in length, more firm and tenacious than common silk, but the cases are very difficult to unravel, and are commonly carded. In the East Indies, silk is obtained, also, from the cocoons of two other species, namely, *Attacus mylitta* and *A. cynthia*.† In India, three other native species are also used; for instance, the Tusseh silkworm, which feeds in the jungle on the jujube tree; the Arrindy, which feeds on the *Palma Christi*; and the Moongha, whose produce is used there to an extent of which we have but little idea.

In South America, there are several caterpillars, besides those of the common silk moth and Atlas moth, which yield excellent silk. Spix says that, in Brazil, a species of silkworm is abundant on a laurel-like shrub, particularly in Maranhao and Para. He says, that although its thread promises a much more brilliant silk than that of Europe, it has never been employed, although it might be with very great facility.‡ At Maranhao and Rio Janeiro, the caterpillars of several species of *bombyx* spin their cocoons of a thicker and stronger silk than that of the common silkworm; and Padre Mestre, who gave the former a trial, found that it forms

a very solid material. It has been proposed to cultivate for the feeding of them a species of mulberry with small inedible fruit, growing near Rio Janeiro.

A caterpillar, which the Indians call sustillo, of the tribe and size of the silkworm, feeds on the leaves of the pacal, a common tree in Peru, and fabricates a kind of silk paper very similar to that made in China. When the caterpillars are about to transform, they assemble at the body of the tree, and co-operate in forming, with the greatest symmetry and regularity, a web of admirable texture, consistency, and lustre, and which is larger or smaller according to their numbers. Beneath this web, they all unite; and, disposing themselves in vertical and even files, form in the centre a perfect square. This done, each of them spins its cocoon of a coarse and short silk, in which it changes to a chrysalis. By-and-by the chrysalis becomes a moth, which, impatient of further confinement, and anxious to take wing, breaks its way through the general web, the fragments of which consequently remain suspended to the trunk of a tree, waving to and fro like streamers, and become more or less white, according to the situation and atmosphere. This natural silk paper has been gathered measuring a yard and a half, of an elliptical shape, which is peculiar to all of it.

The caterpillars of the common ermine moth, (*Yponomeuta padella*), are gregarious, and naturally construct a very fine close web, impenetrable by air, but easily detached from the trees. M. Habenstreet, of Munich, induced them to spin it on a suspended paper model, to which he gave the form and size he required; and he thus obtained square shawls of an ell width, others two ells long and one wide, a balloon four feet in height and two in horizontal diameter, and all of a much lighter fabric than the finest cambric; the balloon weighed less than five grains, and the flame of a single match held under it for a few seconds would raise it to a good height, whence it would not descend for half an hour; a shawl of the size of a square ell, when stretched and blown into the air, resembled a very light smoke passing over; a whole lady's dress, with sleeves, but without a seam, he presented to the queen of Bavaria, who mounted this fairy-like attire on another dress, and so wore it on many great occasions; a shawl of a square ell in size cost only eight francs. The caterpillars, two of which are able to produce a square inch of this delicate fabric, glue their threads closely together while spinning, and to increase the thickness of the layer, if necessary, they were made to pass repeatedly over it; many were of course employed, and those parts of the model and patterns not to be covered were rubbed with spirits of wine, which prevented the caterpillars from working over them. A web seven feet square, perfectly pure, and as brilliant as taffety, was the result of three weeks' labor of about 500 caterpillars.*

Latreille and other naturalists have recommended a trial of manufacturing articles from the silk of the caterpillar of the crimson under-

*Entomological Society's Transactions, 1837, vol. ii. p. 40.

† See Linnæan Transactions, vol. vii., and Colonel Sykes's account of the Kolisura Silkworm of the Deccan, in the Asiatic Society's Transactions, 1834, vol. iii.

‡ Spix's Brazil (1823—31).

*Le Journal de la Société d'Emulation, &c.

wing-moth (*Catocala sponsa*); and Wilhelm says that the experiment has been successfully tried in Germany with the silk of the emperor moth (*Saturnia pavonia minor*). Both these species may be found in England; the former in Kent, Surrey, Berkshire, and Hampshire, feeding on the oak; the latter in Kent, Surrey, Yorkshire, Lincolnshire, Norfolk, and Shropshire, feeding on blackthorn, alder, oak, bramble, rose, elder, &c. Britain produces more than two thousand species of moths and butterflies; yet none of their caterpillars do we turn to any useful account. This is only one instance, out of many that might be mentioned, of our slowness, prejudice, or indifference about availing ourselves of the benefits we might derive from many of our natural productions at present neglected.

Over the surface of the large heaps of maize which are laid up in store in Mexico, the caterpillars of a small moth spin a large delicate silken web, four or five yards long, known there by the name of the Tela de Maiz, or maize cloth. The inhabitants use it as a styptic, or dressing for recent wounds, as the spider's web is used in many parts of Europe.

In some places, lantern flies are used instead of candles. Madame Merian relates the fright she experienced when she opened a box containing some lantern flies, and beheld it full on fire. [We have kept for a long period, by feeding with the moistened sugar cane, its natural aliment, a species of large beetle, found in Cuba and elsewhere, called cucullio, having two luminous spots on its head, which are always visible in the dark. A slight excitement or agitation will induce them to throw out sufficient light to read by. They can, besides, open the outer covering on their breast, and display a diamond-shaped light, more than five eighths of an inch in length, and of great lustre. When flitting about their native fields, at night, they exhibit a wonderful brilliancy. Numbers of them are frequently caught by the planters, and thrown into glass parlor lanterns, tastefully constructed for this purpose, where they afford an agreeable light for the evening, without the unpleasant accompaniments of heat or smoke. The Cuban belles, also, contrive to fasten them in their hair, and various parts of their transparent evening dresses, and thus present a brilliancy, which no jewels, not even that of the great mogul, can match.—Eds.]

The larvæ of *Cicada limbata*, found in various parts of the Chinese empire, produces a kind of white wax. They inhabit most of the southeast provinces of China as well as of Cochin-China, but the best exist in the provinces of Se-tchuen and Yuman, and from the territories of Hentcheou and Yung-tcheou. The wax insect does not much exceed in size, of the common fly; every part of it appears to be perfectly white, or at least, to be completely covered with a white powder; and the head is furnished with pectinated antennæ arched forwards. In its mature state, the wax insect is furnished with wings. The stems of the privet-like shrub on which these insects swarm, appear entirely whitened by a substance or powder strewed upon them;

the same in nature, apparently, as that with which the body of the insect is covered. At a later period of their larva state, the insects obtain a blackish chestnut color, and form on the tree, little pelotons, each about the size of a grain of millet. These are attached to the branches, somewhat in the manner of bunches of grapes, the tree appearing, at first sight, as though bearing fruit. The natives gather these pelotons about the month of April or May, and, having wrapped them up in the broad leaves of Yo, (a kind of grass,) suspend them from the trees. Towards the beginning of the spring, they increase in size; and on the coming of the warm, midsummer weather, they open, the insects emerge from them, crawl about on the leaves and stalks, and deposit their valuable wax, called by the Chinese *Tchang-pe-la*. It is at first somewhat similar to a white grease; but it speedily hardens, and then assumes more the character of wax. When in a fit state, it is scraped from the branches, generally in the autumnal months, and collected in a vessel. By pouring the melted wax into cold water, it coagulates into a paste, which is easily formed into cakes. Sir G. Staunton says it will also coagulate when mixed with oil and other oleaginous substances, so as to be fit for making candles. When composed of one part wax, dissolved in three parts of olive oil, it is nearly as firm as bees' wax, and is much superior to it. The candles made of this wax, yield a clear light without smoke; but owing to their being rather costly, they are used chiefly by the highest classes in China.

The medicinal virtues of the wax are highly commended by Tchi-hen and other Chinese physicians; but their enumeration of its curative properties too much resemble the style of Culpeper and old Gerard, to seem worthy of implicit belief. It is thought to have a wonderful tendency to assist the replacement of dislocated bones, to unite dis severed nerves, to heal wounds, to stop bleeding, and appease pain.

HORSE BREEDING IN RUSSIA.

With respect to the establishments destined for the breed of horses, there are seven crown studs; two in the Voronega government, (Khrenoff and Tchesme,) four in the government of Kharkoff, (Belovod,) and one in that of Nizni-Novgorod (Potchinki). The first two are for the breed of horses of superior blood, so that the stud of Tchesme, contains race horses exclusively—that of Khrenoff saddle horses and roadsters (trotteurs). The other establishments produce ordinary horses only, whether for riding or draught.

On the 1st of January, 1848, there were 4,767 horses in these crown studs. On the same day last year, 4,837; making an increase of 70 in the twelvemonth. During the year in question, the horses sold amounted in number, to 684, of which 595 were the offspring of these studs, and 89 reconditioned from the country stables. The proceeds of the sale were 82,625 silver roubles and 88½ kopeks.

The object proposed in the sale was twofold—

to supply, no doubt, a productive quality of horses to the labors of the country; but principally to procure funds towards the extinction of the debt contracted in acquiring the grounds of Khrenoff.

The stud grooms and officials, who are furnished with their recruits from among the sons of the subordinate dependents of the establishments and the peasants belonging to them, were, on the 1st of January, 1849, (old style,) 3,298 in number, including 1,310 boys.

With the view of affording an education to the children of these functionaries, the government has established schools for them, and to these schools the miscellaneous public are also admitted as pensioners. The schools furnish two courses—one elementary, and intended to form the pupils for the more subordinate duties; the other serving as a preparation for the veterinary calling. In 1849, the students amounted to 646 in number, of whom 611 were state bursars and 35 private pensioners. In addition to these institutions, there is a technical school at the Khrenoff stud, where the pupils are farmed for training grooms and jockeys; and a special stable for racers has been annexed to the establishment.

The capital possessed by this department consisted, at the beginning of 1848, of 108,297 silver roubles, 23 kopeks. The year's income was 402,173 silver roubles, 94½ kopeks; the expenses in the same period were 432,984 silver roubles, 94½ kopeks the balance, therefore, was 77,486 silver roubles, 23 kopeks in hand on the 12th of January, last year.

Besides these more formal institutions, there are twenty-three *country establishments*, destined to the improvement of the rural breed of horses. These twenty-three are scattered through twenty-eight governments. So far back, even as 1848, their stables numbered no less than 1,337 stallions.

In the government of Yaroslaff, Riazan, Toula, Timbiask, Khankoff, Poltava, and some others, these stables contain some thorough-bred stallions for the improvement of cavalry horses, and the annual proceeds are carried to the general fund.

At Moscow, moreover, and in the stud of Khrenoff, there are stables established exclusively for the production of a purer breed; and in the twelve months, 40,673 mares have been offered at these *country stables*, and 25,397 taken. Indeed, 91,000 have been covered since the recent date of the foundation of these establishments, and, at the least, sixty-seven per cent. have foaled. The cavalry horses are already bettered in consequence.

For the maintainance of these stables, a sum is assessed upon the taxable matter of 28 governments. In 1848, the cost amounted to 237,028 roubles and 92½ kopeks; and the tax payers felt the burden to the amount of only one kopek and a seventh a head. The kopek is the hundredth part of a rouble. [The rouble is a money of account in Russia. That coined since 1762, is worth about 75 cents of our money.—Eds.]—*London Morning Post*.

THE USE OF CHLOROFORM DURING CASTRATION OF HORSES.

The first subject was a yearling colt for castration.

Having adjusted my hobbles, I applied the bladder, containing about one ounce of the chloroform, to the off nostril, my assistant closing the other with his hand; when, in less than one minute, the animal staggered, and I believe would have fallen from the effect of it, but we drew the hobbles together, and secured his legs. I then commenced the operation, (you are aware it is not a very long one,) which lasted about three minutes, during which time there was not a struggle, and having finished, we unfastened the ropes, the animal lay for about a minute, and then jumped up all right.

The next was a two-year-old half-bred colt, for the same operation.

Two ounces of the chloroform were put in the bladder, and on its being applied, as in the former case, the animal shook his head, bounded forward, nearly knocking us down, struck out with his fore legs, and appeared almost like a mad horse for some time, (say four or five minutes,) but shortly afterwards he stood more quietly, and the effect of the agent became very visible, by his reeling about.

After having cut through the scrotum, and divided the cremaster muscle of the lower testicle, which I did with perfect ease, and without any notice having been taken of it by the patient, I proceeded to take hold of the other, for the purpose of removing it, when I found it so withdrawn from my reach, that I was compelled to wait about a minute and a half for its re-appearance. Having then secured it as before, and cut into the scrotum, before I could divide the cremaster, he gave a struggle, and continued to do so for some little time, and, in fact until I finished the operation. I am of opinion the struggles were more violent than if the chloroform had not been used. I, therefore, am of opinion that there is no certainty in its action, and scarcely any advantage, on the score of humanity, to the patient, especially during the operation of castration; but I will give it another trial upon some animal about to be fired. Should you see anything in my description of the use of the agent that requires alteration, I should feel obliged by your making me acquainted with it, so that I may adopt it in my next case. Do you not think that the sensation which causes the appearance of madness, must be more painful than even the operation itself?

The administration of chloroform seems to have been attended by different results in the two cases above described. In the case first operated on, the agent had a speedy, and, so far as ensuring quietness and insensibility to pain are concerned, a beneficial action. In the second instance, an increase of excitability in the nervous system preceded the full anæsthetic action of the chloroform. From what we have seen of the employment of this agent, we may remark that our experience corroborates the accounts before given as to the uncertainty or irregularity of its operation. Even provided

that its mode of being administered is always the same, there is a great difference in the manner and time of various horses becoming affected with it, and we cannot beforehand tell upon which animals it will produce a favorable or unfavorable influence. And, again, in some cases, it will operate so fully and efficaciously as an anæsthetic, that a horse under its action, though subjected to painful operations, may not for a while need the usual securing by ropes and hobbles in order to restrain his struggles; yet, almost as in a moment, and without warning, the animal will sometimes begin to writhe and dash about with the greatest violence. If chloroform uniformly produced complete stillness and insensibility, and if it acted with a like certainty in every case, when given to the horse, it would be an agent worthy of every dependence; but so long as it remains unequal in its operations, we cannot rely upon it as calculated to supplant the hobbles and ropes usually employed during the performance of operations to ensure safety to the horse, operator, and attendants.—*Veterinary Record*.

PROPOSED REMEDY FOR STEALING FRUIT

MANY farmers in this vicinity are deterred from cultivating fruits, from the fact of its liability to be stolen by unruly boys, not to say men, or animals in the shape of men. Now, if we lived among Arabs, we should probably expect this; but in a civilized community, governed, as we claim to be, by laws, and where a very large proportion of the inhabitants are themselves cultivators of the soil, this state of things is really too bad. Having seen various remedies suggested, such as bull dogs, tartar emetic, hedge fences, &c., I have thought of proposing a plan, which, if thoroughly carried out, I have no doubt would be more effectual than all others combined. Let every person who occupies a single rod of ground, plant a grapevine, a peach tree, a pear tree, an apple tree, and if natural fruit, graft or bud them with some of the best varieties in the neighborhood. Plant, also, a few cherry stones, if you can find no tree that you are able to buy; set out a currant bush, or raspberry plant by the side of the fence, and almost any person can have these given him if he will only take the trouble to set them in the ground; or, if not given him, the expense is a mere trifle, a few shillings at most, and my word for it, no man, who knows the pleasure, yes, the *pleasure* of cultivating, and the vexation of having them stolen, will ever be guilty, nor suffer his children to be guilty of such meanness afterwards.

But it may be said, "I have no land to spare for such things as these, I must raise what will turn to the most profit." Now I ask, what will pay better than fruit of almost every kind, at the present day? Besides, would you not prefer being at a little trouble, or even a trifling expense, to raise these things, rather than have your children pilfer, or even beg them of your neighbors? But it will be said, I shall not live long enough to enjoy them, if I do take all this trouble. Are you sure of that? You can prob-

ably get a fair crop of grapes in two to three years, if you will simply train a vine to your house, or plant it in your garden or yard, and set a pole by the side of it, to run upon; and so with almost every kind of fruit tree. They will bear in much less time than is generally supposed, if they are only taken care of. But supposing you do not live to enjoy it yourself, do you wish to do nothing for your children? or do you wish the world to be no better for your having lived therein? If so, go on in the "even tenor of your ways," and encourage your children to "follow in your footsteps," and your wish will probably be gratified.

S. E.

THE ROLLING STONE GATHERS NO MOSS.

NEITHER does the uneasy farmer who is constantly moving or talking about mowing *somewhere* to find *rich land*. Generally speaking, the migrating man belongs to that class who are careless of the soil, exhaust it for present crops, without an eye to the future. His lands are heavily taxed by injudicious management, and before he has secured the value of the labor bestowed in clearing them, he is left with a crippled plantation, yielding but a poor crop. To move in quest of the virgin soil again, is but incurring heavy expenses, hard labor, loss of time, deprivations innumerable, besides parting with the old homestead for a mere trifle, when he could soon make it rich and productive, if he would but feed it with half the care that he feeds his own imagination upon some visionary scheme of growing rich in "El Dorado," to which he is about to emigrate.

It will not do to hoe a great field for little crops, nor to mow twenty acres for five loads of hay. Enrich the land, and it will pay you for it. Better farm fifty acres well, than fifty by halves, and it is much better to improve the old farm, than to go off upon some Utopian expedition after a new one.

VALUE OF AN ORCHARD.—Every farmer or mechanic who owns an acre of land should supply it with fruit trees. The fruit would be worth more than any other product that he would obtain from it, besides the advantage of comfort and health to the family. One individual of our acquaintance cleared off the rocks and bushes from an acre of worthless land, and set out 36 apple trees. The fruit has paid for all the labor, the land and the trees being now worth \$200.

THE HOME OF TASTE.—The home that all admire is not made by the upholster or cabinet maker—by rich carpets, rosewood, mahogany, and gilding. It must have the blandishments of true politeness and kindly dispositions, that always create beauty, taste, contentment, and love of home, whether in palace, cottage, or cabin. The home of taste is always more ornamented by the architect of nature, than by the artificer. Shrubs, fruit trees, flowers, and green grass, in their season, all lend their charms and help make up the *tout ensemble* of the home of taste.

TO MEASURE THE HEIGHT OF STANDING TREES.

A CORRESPONDENT of yours, at Fond du Lac, in the current volume of the *Agriculturist*; inquires whether "you or any of your readers can give a description of an instrument for taking the height of trees while standing."

There are two simple methods which I have seen practised in France, and which, though they may be well known and familiar to many, I have never seen described, nor used in this country. One is, when a tree is isolated, or with a space around it sufficient to see its top without interruption, the height is taken by measuring it by an angle of 45 degrees from the eye, or in other terms, by making the tree one of the sides of an imaginary right-angled triangle. To do this, take a thin piece of board, say 4 feet long by 6 inches in width, jointed perfectly straight on one of its edges. At one extremity of this board, an exact square of 6 inches is traced by black or white lines, to the upper angle of which a small plumb is suspended by a line of a foot in length. The operator then puts the straight line of the board to his eye, walks backward from the tree to the point of distance, when the eye, running along the line of the board, strikes exactly the extremity of the top, at the same time that the line of the plumb passes exactly through the upper and lower points of the square traced on the lower end of the board and from the point where he then stands, the distance to the foot of the tree adding thereto the height of the operator from his feet to his eyes and one half the diameter of the tree, is its true height.

Another method still more expeditious and simple is used by measuring the shadow of the tree when the sky is perfectly clear and there is no interruption to its shade. Take a rod or stick of 6, 8, or 10 feet in length; place it perpendicularly on the earth by a plumb line; and make an exact measurement of the shade it casts upon the ground; then measure the length of the shadow of the tree with equal exactness, and as the length of the shade of your rod is to its length or height, so is the length of the shadow of the tree to its height.

A TRAVELLER.

GUNPOWDER FOR CHOKED CATTLE.—Make a cartridge large enough for a musket and thrust it down the throat; if that does not produce relief, repeat the charge; or, if the choking is so bad that this will not relieve it, you may use fire with the powder with the next charge.

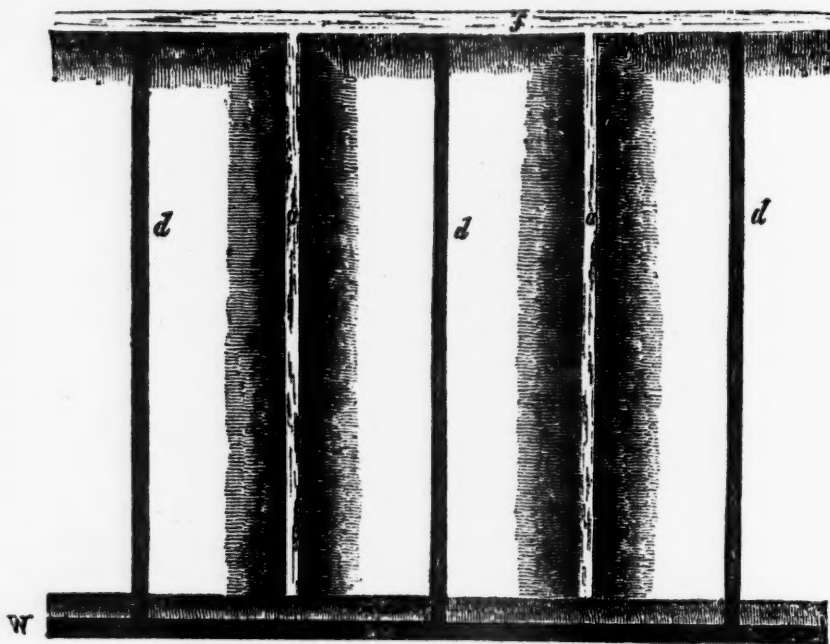
IRRIGATION.—No. 2.

SOMETIMES situations occur at the foot of hills, or along the borders of streams, where the land is flat, or nearly level, and the modes described at pp. 216, 218, of the current volume, for distributing the water, cannot be applied, for the want of a sufficient declivity to allow the water to pass rapidly over the surface. In such cases, the whole field should be laid out into broad beds, 60 or 80 feet wide, undulating, as it were, like the waves of the sea. The central or upper part of these beds, or panes, should be made quite level from end to end, through each of which a channel, or "float," *a, a*, should be cut for conducting the water from the feeder, *f*, at the higher side of the meadow, as indicated by Fig. 67 in the diagram below.

From the edge of these channels, the surface



IRRIGATION—VERTICAL SECTION.—FIG. 66.

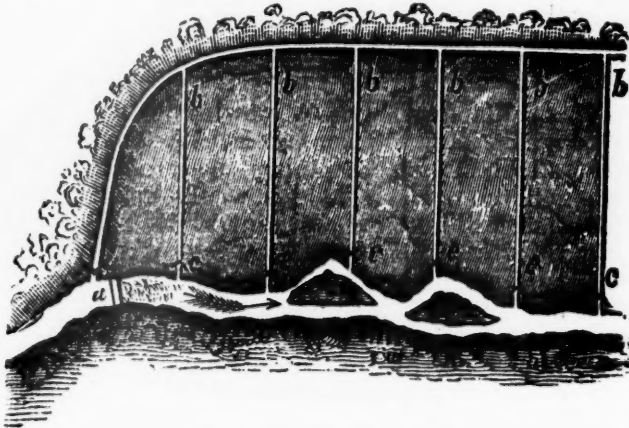


IRRIGATION—GROUND PLAN.—FIG. 67.

of the ground should be made to slope, from one to two feet, both ways from the centre, and ditches, or drains, *d, d, d*, cut at the bottom, between the beds, parallel with the "floats." These beds should not be curved like the ridges of a plowed field, but form inclined planes from the centre to each side. The floats are supplied by a main channel, or feeder, *f*, at right angles to the beds, elevated somewhat above them, and all the ditches or drains, *d, d, d*, should be made to run into another main ditch, or waste drain, *w*, at the lower side of the field, parallel to the feeder *f*. By this arrangement, the course of the water will be very regular. As soon as the "stops," or flood gates are opened, it flows into the floats, or upper channels, until they are full to the brim, when they will overflow the

whole of their length, and the sloping sides of the beds covered with a thin sheet of running water, which the lower drains will collect, and carry off in the waste drain, *w*.

There are other cases, also, which occur along the borders of streams, where the land is level, and too low to be irrigated by any means, except by inundation. As a familiar instance of this, let *a*, Fig. 68, denote a dam thrown across a river or brook, where there is a fall of four or more feet; *b, b, &c.*, a ditch running along the base of a hill, or the upland, adjoining a level, swampy piece of ground, kept constantly wet by a number of springs, which this ditch will cut off, and give the low, boggy ground a chance to dry; *c, c, &c.*, are lesser ditches, running nearly at right angles with the main ditch, *b, b, &c.*, to carry off the spring water, and aid, also, in draining the meadow, on either side. An embankment is thrown up along the margin of the stream, to prevent it overflowing, except at very high water. Gates are constructed at each end of the lateral ditches, as at *b, b, &c.* and *c, c, &c.*, which can be opened or closed, at pleasure. When it is required to draw off the water from the meadow, the gates at *c, c, &c.* are kept open; but when it is wished to inundate, or irrigate it, they are shut, and the gates at *a*, and *b, b, &c.* are open.



IRRIGATION.—FIG. 68.

ed, which immediately causes the whole meadow to be overflowed. Hence, when the meadow is too wet, the water can be drawn off, and when too dry, it may be let on, so that a crop of grass may be insured, whether the season be wet or dry. The earth taken out of the ditches is to be employed in making the embankment along the margin of the stream, and for raising the centre of the panes, or beds.

This latter mode is peculiarly adapted to rice fields, wherever the nature of the surface will permit, and the means of irrigation are at hand.

TO DESTROY WEEDS IN WALKS.—Saturate water with chloride of sodium, and pour it boiling hot on the weeds. Be careful you get the right article. It is not expensive. You will find a description of this substance in almost any chemical work. We recommend you to look for it and satisfy yourself that it is not a dangerous substance to have about.

MR. SHEAFE'S SALE OF SHORT HORNS.

This will positively take place at New Hamburg, on Thursday, the 29th of August, as advertised at page 264 of this number of our paper—*rain or shine*. The stock will be tied up and arranged according to the numbers in the catalogue the day before the sale, and on sales day. Thus every one will be able to examine them to entire satisfaction. When the sale commences, an ample ring will be staked out and roped. Into this circle, each animal will be brought when it is put up for sale, and walked round for inspection. As all persons will be kept outside the ropes, this again will give every one present an opportunity of close examination. If there be any unsoundness or vice in any animal on sales day, the public will be informed of it. It is my intention that everything shall be conducted in the most honorable manner; and in doing this, I am happy to add, I shall only carry out the express wishes of the owner of the herd.

Taking their great milking properties into consideration, I doubt whether so valuable a lot of cattle were ever before offered for sale in this country. This is the eleventh year of their breeding, at the High-Cliff Farm, and unbounded pains have been taken with them. Every heifer which did not prove a good milker was invariably immediately disposed of by Mr. Sheafe. A short account is given of their milking qualities in our July number, page 226.

Conditions of Sale.—In order to save time in bidding, and ensure dispatch, the cows and heifers will be put up at a price varying from \$25 to \$100 each, dependent upon the animal. If bid off at the price named when put up, or anything above, it will then be the property of the person bidding, otherwise it will be considered the property of Mr. Sheafe. The bull calves will be put up a \$25 each, and Exeter at \$300. The sheep and lambs will be put up at \$5, \$6, and \$7 per head, as above. The swine at \$5 to \$10 per head, according to age. The working oxen at \$100.

After an animal is bid off, it will then be considered at the risk of the owner; but it can remain on the farm free of expense, one week.

Terms.—For all sums amounting to one hundred dollars and upwards, approved endorsed notes will be taken at six months, or a discount of five per cent. for cash.

How to Reach New Hamburg.—It is on the east side of the Hudson River, eight miles above Newburg and about the same distance below Poughkeepsie. A train of cars runs to and from the city of New York five times each day, and performs the distance in two to three hours. Steamboats from Albany run four times each day, and land at Poughkeepsie, whence cars run to New Hamburg in 15 minutes; thus rendering the place easily accessible for gentlemen coming to attend the sale, from either the east or the west. The fare of each passenger does not exceed eighty-five cents to one dollar, from New York or Albany to New Hamburg.

A. B. ALLEN.

New York, August 1st. 1850.

REMARKS ON IMPROVED FARMING IMPLEMENTS.

PROBABLY there has been no one fact, within the last ten years, which has given so strong proof of a new impulse in favor of agriculture, as the multiplicity of new and improved implements and machines. These are both time and labor-saving, and do the work a great deal better than the old machines ever could do. So, when the farmer can save time and labor in his business, then he saves money; and yet, very few of the mass of farmers, seem to appreciate this doctrine, from the fact that they do not practise it. I well know, that we farmers are too apt to go on the "patch-up plan," in using farming tools; that is, we like to use the old plow, harrow, &c., as long as possible, and much longer than it will pay.

One of the most important and ancient of all agricultural implements is the plow. It is said that, in the early ages of the Christian era, it was simply a crotched stick, sharpened down to a point, while, for a team to draw it, an "old woman and an ass were yoked up together," which was probably the best team they could get. And even now, it is stated by travellers, that, in many districts of Europe, the plow has undergone very little change in its form or construction, for the last three hundred years. It was a great era for the plow, when the iron moldboard first came into use twenty-five years ago. And yet, there is as much difference between the improved iron plows of the present day, and the first ones that came into use, as there was between the first iron plows, and the old wooden ones, which went through the ground more like drawing a sharpened billet of wood, than they did like plowing.

Every farmer knows, or should know, that when a soil is well and thoroughly plowed, that at least two thirds of the labor of the cultivation of the crop, is already done. Hence the necessity of having a plow that works on correct principles. And I am happy to say, that there is at the present time, many kinds of plows that are made to work through the soil with great ease; also doing the work, as a plowman would say, in a scientific manner. Notwithstanding this, there is only now and then a farmer, who knows how to appreciate the difference between these improved plows, and one of the common ones in general use. A common saying with farmers is, "I can buy a plow for five dollars, which will answer my purpose just as well as your 'centre-draft,' that you have to pay ten and twelve dollars for." But stop, farmer, we have heard that doctrine preached so long, that we have learned it by heart; and yet, we mean to say that there is not one word of good sense in the whole of it. It is true that you can buy a plow for five dollars, and it may answer some kind of purpose, and that is about all you can say. The truth is, the cheap plow cannot do the work right, because it never was made right, to begin with, while the ten-dollar plow, is just the article, for it runs through the ground like a charm, doing the work in a perfect manner. Many times I have heard of men being "penny

wise and pound foolish." If that doctrine was ever true, it is so with these farmers who purchase tools to farm with.

Derby, Ct.

L. DURAND.

LONG-ISLAND LANDS.

In your remarks in the last number of the *Agriculturist*, upon the wild lands of Long Island, you say, "Why emigrants should all be sent off a thousand miles to the west, when there is so much vacant land within a few hours' sail or ride of New York, is more than any one, we think, can answer." The answer to this, is simply, because nobody has ever, heretofore, brought these lands to the favorable notice of those desirous of settling on new lands, and from the opinions entertained and promulgated by the people of Long Island, adverse to cultivating them, and for no other reasons; for these lands are productive, when cultivated like those of other parts of the island.

Let those who doubt this, go and examine the beautiful garden and grounds at Lake-Road Station, where, a year ago, there was nothing but "brush and barrens," and also at Yaphank, and other places east of Lake Road. Nothing can exceed the thrift and vigor which the crops at these places now exhibit. They will compare favorably with any gardens or crops on the old and more cultivated parts of Long Island.

E.

Brooklyn, July 16th, 1850.

GREAT CROP OF HAY.—A mowing lot, says the *Springfield Republican*, of H. W. Clapp, at Greenfield, Mass., containing seven acres and one hundred rods, yielded last week, twenty-nine tons and four hundred and ninety-seven pounds of hay, or over four tons to the acre. We think this hay must have been weighed in rather a green state. When so much grass grows upon an acre, it is almost impossible to cure it as dry as when a less quantity is produced. We have no doubt, however, under any circumstance, that it was a magnificent crop. A friend at our elbow, gives it as a decided opinion that this mowing lot was well manured; and, furthermore, that whatever was put upon it, paid as well, in the long run, as digging California dust, or Wall-street speculations.

YOUR NEIGHBORS HENS.—Do they trouble you? feed them and coax them over your side of the fence and they will leave you all their eggs, and then the owner will take care of them. He will be a little mad at first, but will afterwards laugh at the cunning trick. Try it, it is better than shooting them.

THE BEST MANURE FOR TREES is decayed leaves. To a cord of this, add four bushels of oyster-shell lime and one of salt, and as much charcoal as you like and you will find it a valuable compost for fruit trees or shrubbery. Wood ashes or potash, in moderate quantities, in any shape, will be found valuable.

MANURES—THE FOOD OF PLANTS.—No. 4.

NITROGEN, so important in the formation of the gluten in wheat, and an indispensable constituent of all muscle-forming food of animals, constitutes about 79 per cent. of the atmosphere, but abundant as it is in the air, plants cannot absorb it by their leaves, nor in its simple form by the roots. For this purpose, it must be in a chemical combination with its equivalent of hydrogen, forming ammonia; or with oxygen united to some alkaline base, as a nitrate.

Ammonia is generated in large quantities from stable and other rich manures while passing through the process of fermentation. It escapes in the form of carbonate of ammonia, and passes into the air, and is lost to that farmer who suffers his manure heaps to obtain a great degree of heat. The ammonia in the manure, (as confidently asserted by some, who have written upon the subject,) is the most valuable part of it. Guano is generally esteemed valuable in proportion to the amount of ammonia it is found to contain upon analysis. There are several ways by which this volatile gas can be partially, or wholly arrested in its upward flight, from the fermenting manure. For this purpose, dilute sulphuric acid, gypsum, copperas, charcoal, clay, and sawdust are used. The three first-named will fix the ammonia, as the acid will chemically combine with it, forming sulphate of ammonia, a soluble, but not a volatile salt of ammonia. The three last-named substances possess in a great degree, the property of absorbing and retaining for the use of the plants the carbonate of ammonia. It is not only important to the farmer who wishes to grow good crops, to save all the ammonia of his manures, but to obtain from other sources as much as possible. Probably but few, compared with the great mass of farmers, are aware of the great loss they suffer from a lack of knowledge in the proper management of manures. Thousands are careful to save most of the solid part of the droppings of their cattle, while they take no means to save the urine, which is vastly more rich in nitrogen than the dung, as also inorganic matters (with perhaps the exception of silex). I have before me, a statement by Mr. Flietman, of the Geissen Laboratory. He has recently found that the inorganic constituents in the urine and excrements of man, for a period of 24 hours, are to each other as 13 to 2½. That is, that the urine contained nearly six times the amount of earthy salts that the *feces* did. Perhaps, there is not that difference between the solid and liquid excrements of cattle and horses, but I think, I do not hazard much, in saying, that the urine of a stock of cattle, if rightly managed and applied, is worth as much as the manure. Not having a barn cellar, I use at the rate of one bushel of fine dry charcoal and three quarts of ground plaster daily to every ten head of my cattle. This is spread over the hovel floors, with litter of straw and refuse hay thrown upon the coal. The manure is daily thrown under sheds and protected from rain and snow. The charcoal I obtain at our rail-

road depôt—a mile from my farm. There are thousands upon thousands of bushels made daily by the locomotives on our railroads in this country, and probably nearly the whole of which is wasted, a large proportion might be very cheaply obtained by farmers. Charcoal for agricultural purposes is much more valuable than most farmers ever dreamed of.

There are various sources besides what a farmer has about his premises, from which he can obtain materials for increasing the amount of nitrogen for feeding his crops. The fleshings of hides and skins from tanneries—ten pounds of lean meat contains as much nitrogen as 100 pounds of cowdung. Also waste wool from cording mills—woolen factories, &c., refuse fish and fish offal, hair bristles, the droppings of the hen roost, &c. All accidentally defunct animals from a mouse up to an elephant, instead of being unburied to pollute the air by their stink, should be covered up, (not buried,) in ten times their bulk of loam, turf, muck, or clay. All the above-named substances yield nitrogen in large quantities, and many of them are equally rich in the phosphates. The phosphates and nitrogen constitute the most important part of all animal manures. If farmers would generally exercise a little more industry and skill in this matter, hundreds of thousands of dollars' worth of extra manure, might annually be made from waste materials that, in many cases, are a nuisance.

At page 64 of your February number, I perceive that one of your correspondents, Mr. Oglesby, of Missouri, has got on the *right track*, as he is in the habit of collecting from *town* a great variety of fertilisers which he gets all "free gratis for nothing"—as thousands of farmers could if they possessed equal tact and go-a-head-i-tive-ness. He says from reading your paper, he finds these materials all contain the elements of fertility if he only knew how to manage them. I will just say to Mr. O. compost all your materials collected in *town*, with loam, muck, clay, &c., for a few months before using, and you will have a large amount of the "element of fertility" in an available form for your crops, and this you can have without purchasing Bommer's or any other man's patent right for making manure.

LEVI BARTLETT.

Warner, N. H., March, 1850.

SPAYING SOWS.—Have you ever heard of spaying sows, by a new process? Two months ago, I tried with success, and with less pain to the animal, than when done with the knife. It is, to inject with a small syringe, up the uterus, about a wine-glassful of sulphuric acid. This destroys, on the part of the sow, all desire to take the boar. I would inquire whether any other one has tried this plan? INQUIRER.

SORE NECKS OF OXEN are sometimes cured by covering the yoke with sheet lead. White lead is also an excellent thing to dry up the sores of oxen or horses.

CULTIVATION OF ORCHARDS.

HAVING recently set out a small apple orchard of about 100 trees, and believing I have got on the right track, in the manner of planting out, I am willing your numerous readers should enjoy the benefit of it; and if any of your correspondents know of a better method, I shall be very happy to hear from them on the subject through the *Agriculturist*.

In the first place, the land is what would be called clayey loam, resting on a subsoil, or hardpan, some two or three feet below the surface, and is consequently wet in the spring and fall, and had been in grass for a few years previous to the summer and fall of 1848, when I plowed and harrowed it well. I then, before the commencement of winter, dug the holes for the trees, 33 feet apart, each way, making them four or five feet or more in diameter, and in all cases as deep as the subsoil. These, I let remain open through the winter, for the action of the frost, and until the ground became sufficiently dry to work in the spring. I then filled the holes to a suitable depth with the surface soil, using no manure. I then set out my trees in such a manner that they would stand about as low in the ground as when standing in the nursery. The ground was then thoroughly manured, and planted with corn and potatoes. While spreading the manure, I was careful to do well by the trees, and in hoeing, I gave them their share of attention.

The consequence is, every tree has lived, and grows well, some having made three feet of wood on the upright branch, the first season. I should have remarked that my trees were small, only two years from the bud, not being able to procure such varieties as I wished, of a larger size; but whether in the end, I shall be the loser in consequence of this, I am not certain. My intention now is, to cultivate hoed crops among them until they are well established, when I may seed it down again for a few years.

Harwinton, Ct., Feb., 1850.

A FARMER.

THE SCOVILLE HOE.

As you require practical articles upon practical subjects, allow me to call your attention to the Scoville hoe. I do not remember when I first saw these hoes, but think it was in the spring of 1848, and that I have cultivated two crops with them. Though this matters not, my object being, first, to advise the hoe to be set a little more scraping. I should advise the setting to be in proportion to the size. No. 1 being for small hands, they require to be even more scraping than Nos. 2 or 3. I have the same hoes that I worked with in '48 and '49, and ordered a new set for other hands. The first set are worn, to be sure, but I would not this day exchange them for other steel hoes. The largest size are set too digging for grown hands. The principal use for hoes, on a cotton plantation, is for scraping, as it is now getting quite common to scrape cotton and corn, and throw up beds of earth to cotton and corn, with the plow. We have tried to set ours, but are fearful of breaking or bending in the blade.

Secondly, the sharpening on the under side

is wrong—I know the opinion of others, and have tried both plans, not only myself, but my negroes have tried them. In using hoes, they wear on the under edge, which assists in keeping a sharp edge. Hoes should always be sharpened on the upper surface, and thus the wear keeps them sharp longer, and besides, they will not bound.

And thirdly, make more of them, so they will not cost so much. My hoes cost, this year, in N. O., No. 1, \$10½, No. 2 \$11, No. 3, \$12 per dozen; freight and commissions, looking at them by some clerk, and entering on books, not less than 75 cts. more, so that my hoes average full \$1 each, when handled and ground for use.

This is too much, or I am in error. I think the same hoe in every respect, ought to be afforded in N. O., at \$8 per dozen, assorted sizes, and at that price, I have no question but what they would be used by seven tenths of the planters. There are some who want hoes at 50 cents each, and who do not believe there is any use in a better one. I ordered 4 dozen for self and three planters this season, but they were not to be had, and I am very sure that, with but little trouble, I could get orders myself for 40 or 50 dozen, at a living, aye, money-making price.

M. W. PHILIPS.

We can always furnish the above hoes at the following rates, viz:—

No. 1, improved cast-steel cotton hoes, per dozen,	\$7.25
No. 2 " " "	7.75
No. 3 " " "	8.25
No. 4 " " "	8.75

STARCH FROM INDIAN CORN.

MANY of our readers are not aware of the extent of this new branch of manufacture, which we hope soon to see take the place of whiskey distilleries in the consumption of our great American staple, Indian corn. There is now in operation, at Oswego, New York, a manufactory that consumes 2,000 bushels of corn a-week, which makes 40,000 lbs of the whitest and most beautiful starch for all domestic purposes, whether for the laundry or pantry. The building is 130 by 190 feet, five stories high, (to which an addition is about being erected,) and contains 200 cisterns for precipitating the starch, eleven furnaces with drying rooms, and employs about 70 men, and manufactures upwards of \$120,000 worth of starch, annually. There are two other similar establishments in the United States, and yet the demand is constantly increasing.

It is found that this kind of starch is superior to any other for culinary purposes, because it is always made from clean, sweet corn, the gluten of which is separated by a peculiar process of grinding and washing, the corn being first steeped in a chemical liquor, then reduced to pulp, sifted, and filtrated, and passed into huge cisterns, whence it flows through long, narrow troughs, draining off the water through coarse cotton cloths. In twelve hours, the starch becomes like wet clay, capable of being handled and dried, a process that requires much

care and a powerful heat. The residue of the corn is used for feeding hogs and other domestic animals.

This is a new use of Indian corn, but one, we hope, that will prove profitable to the manufacturer, and induce a very large consumption of this grain, and thereby increase the price to the grower. We should like to have some statistics of the other corn starch manufactories in the country for the purpose of noticing them as being intimately connected with the interest of the agricultural community, and the object of our journal.

SALE OF MR BATES' SHORTHORNS.

As we briefly announced in our last, this great sale of shorthorn cattle took place on the 9th of May last, at the residence of the late Thomas Bates, Esq., of Kirklevington, Yorkshire. It attracted more attention than any other cattle sale ever before made in England. About 5,000 persons were present, among whom were some of the most distinguished noblemen and gentlemen of Great Britain; and these were not mere lookers-on from idle curiosity, but *actual purchasers*, for the purpose of improving their already choice herds.

The catalogue contained forty-eight cows and heifers, and twenty-two bulls—seventy head in all; but as Refiner, lot 7, of the bulls, was out, and Fifth Duke of York, lot 20, was dead, only sixty-eight animals actually came under the hammer. The bidding was spirited, and the herd realised the extraordinary sum of £4,558 1s., (about \$22,000,) being an average of £67 0s. 7d. each, (about \$325,) and this, let it be remembered, when the farmers of England are suffering exceedingly from the low prices of their products, brought about by the recent great change in the corn laws. Had Mr. Bates made a sale of his stock in 1841 or '42, when the herd was in its glory, and higher prices ruled for agricultural products, we have not a doubt but he would have realised 500 guineas each for several of his animals. We had the pleasure of passing several days with him at his house, in 1841. He told us then that he would not take 800 guineas, (\$4,000,) for the Duke of Northumberland, nor 400 guineas, (\$2,000,) each for Duchess 34th, Duchess 42d, and Duchess 43d. We have understood that he was once actually offered 800 guineas, (\$4,000,) for two of these cows. The Duke of Northumberland, up to that day, was unquestionably equal, and, in the estimation of many, superior to anything of the cattle kind England had ever produced. Of the cows, Mr. Bates preferred Duchess 34th, but our first favorite was Duchess 43d. She was the most perfect cow, according to our notion, we ever looked at. Nevertheless, we do not wish the public to infer from this that we think ourselves anything like so good a judge of shorthorns as that veteran breeder, the late Mr. Bates. On this point, we felt humble enough in his presence, still we had our opinion, and did not hesitate to express it frankly before him, in England, as we do now before the American public.

The principal value of Mr. Bates' herd consisted in his possession of what he called his Duchess tribe. This he very judiciously crossed

with Belvedere, a Princess-tribe bull, bred by Mr. John Stephenson, of Wolviston—the same who bred Exeter, Mr. Sheafe's bull, advertised for sale at page 264 of this number of our paper. Belvedere was the sire as well as the grandsire of the Duke of Northumberland and Duchess 43d.; and their great perfection was undoubtedly owing to this large diffusion of Princess-tribe blood in their veins. Crossed with the good old Duchess blood, it had a wonderful renovating effect. But we must stop, otherwise we should soon fill a volume on this interesting subject; yet, before doing so, we wish it distinctly understood, that in speaking so highly of Mr. Bates' stock, we refer to those animals in it of the Duchess tribe only, after the cross with Belvedere. Of some of the later crosses, we have an entire different opinion.

From all we hear from England, we do not believe the herd, at Mr. Bates' death, was anything like so good as it was in 1841 and '42. But some might think us invidious to enlarge upon this subject at the present moment. We will therefore forbear, and come to the particulars of the sale at once.

COWS AND HEIFERS.

1. Oxford 2d, roan, calved April 20, 1839; got by Short Tail (2,621), d. Matchem Cow. Marquis of Exeter, Burghley House, Stamford—£54 12s.
2. Wild Eyes 5th, roan, calved March 19, 1840; got by Short Tail (2,621), d. Wild Eyes. Mr. A. Stevens, New York, United States—£21.
3. Waterloo 4th, red and white, calved May 20, 1840; got by Cleveland Lad (3,407), d. Waterloo 3d. Mr. Singleton, Givendale, Pocklington—£22 1s.
4. Foggathorpe 2d, white, calved September 14, 1840; got by Duke of Northumberland (1,940), d. Foggathorpe. Mr. Parker, Yanwath Hall, Penrith—£22 1s.
5. Wild Eyes 7th, white, calved November 27, 1841; got by Duke of Northumberland (1,940), d. Wild Eyes 3d. Mr. Jefferson, Preston Hows, Whitehaven—£24 3s.
6. Wild Eyes 8th, roan, calved February 16, 1842; got by Duke of Northumberland (1,940), d. Wild Eyes 2d. Marquis of Exeter, Burghley House, Stamford—£42.
7. Duchess 51st, roan, calved August 18, 1842; got by Cleveland Lad (3,407), d. Duchess 41st. Mr. S. E. Bolden, Red Bank, Lancaster—£63.
8. Foggathorpe 4th, roan, calved December 14, 1842; got by Duke of Northumberland, (1,940) d. Foggathorpe. Mr. W. Sanday, Holmepierpoint, Nottingham—£52 10s.
9. Oxford 4th, red and white, calved August 8, 1843; got by Duke of Northumberland (1,940), d. Oxford Premium Cow. Mr. E. James, Wylam Hall, Newcastle-on-Tyne—£28 7s.
10. Duchess 54th, red, calved October 30, 1844; got by Second Cleveland Lad (3,408)*, d.

* Mr. A. Stevens, now in England, writes us, this is a mistake: that he has Mr. Bates' bulling book, showing Duchess 54th was got by Duke of Northumberland (1,940), which makes no trifling difference in the value of this cow.

- Duchess 49th. Mr. Eastwood, Burnley, Lancashire—£94 10s.
11. Duchess 55th, red, calved October 31, 1844; got by Fourth Duke of Northumberland (3,649), d. Duchess 38th. Earl Ducie, Tortworth Court, Wotton-under-Edge—£110 5s.
 12. Duchess 56th, red and white, calved November 3, 1844; got by Second Duke of Northumberland (3,646), d. Duchess 51st. Mr. H. Ambler, Watkinson Hall, Halifax—£54 12s.
 13. Oxford 5th, roan, calved November 24, 1844; got by Duke of Northumberland (1,940), d. Oxford 2d. Mr. L. G. Morris, Fordham, Westchester-County, New York, U. S.—£74 11s.
 14. Wild Eyes 14th, red and white, calved January 24, 1845; got by Duke of Northumberland (1,940), d. Wild Eyes 3rd. Mr. Jonas Webb, Babraham, Cambridge—£30 9s.
 15. Wild Eyes 15th, red and white, calved April 3, 1845; got by Fourth Duke of Northumberland (3,649), d. Wild Eyes 8th. Mr. T. Fetherstonhaugh, Kirkoswald, Penrith—£32 11s.
 16. Wild Eyes 16th, roan, calved August 1, 1845; got by Second Duke of Northumberland (3,646), d. Wild Eyes. Mr. Higgs, Stamford—£23 2s.
 17. Wild Eyes 17th, red and white, calved August 4, 1845; got by the Second Duke of Northumberland (3,646), d. Wild Eyes 58, Mr. Faviel, Snydale Hall, Pontefract—£43 1s.
 18. Wild Eyes 19th, roan, calved March 20, 1846; got by Second Duke of Oxford (9,046), d. Wild Eyes 10th. Mr. N. Cartwright, Haugham, Louth—£63.
 19. Cambridge Rose 5th, roan, calved April 28th, 1846; got by Second Cleveland Lad (3,408), d. Cambridge Rose 2nd. Mr. S. E. Bolden, Red Bank, Lancaster—£47 5s.
 20. Oxford 6th, red, calved November 6, 1846; got by Second Duke of Northumberland (3,646), d. Oxford 2nd. Earl Ducie, Tortworth Court, Gloucestershire—£131 5s.
 21. Wild Eyes 21st, roan, calved February 19, 1847; got by Second Cleveland Lad (3,408), d. Wild Eyes 10th. Mr. A. Morrison, Mountblairy House, Turiff, N. B.—£40 7s.
 22. Waterloo 9th, red roan, calved February 24, 1847; got by Second Cleveland Lad (3,408), d. Waterloo 6th. Mr. R. Ashton, Bury, Lancaster—£79 16s.
 23. Wild Eyes 22nd, roan, calved July 26, 1847; got by Second Cleveland Lad (3,408), d. Wild Eyes 8th. Mr. H. Champion, Ranby House, East Retford—£105.
 24. Wild Eyes 23rd, roan, calved September 3, 1847; got by Second Cleveland Lad (3,408), d. Wild Eyes 9th. Mr. A. L. Maynard, Marton-le-Moor, Ripon—£105.
 25. Wild Eyes 24th, roan, calved September 18, 1847; got by Second Cleveland Lad (3,408), d. Wild Eyes 5th. Mr. Drummond £42.
 26. Waterloo 10th, red, calved October 27, 1847; got by Fourth Duke of Northumberland (3,649), d. Waterloo 8th. Mr. A. L. Maynard, Marton-le-Moor—£63.
 27. Duchess 59th, roan, calved November 21, 1847; got by Second Duke of Oxford, (9,046), d. Duchess 56th. Earl Ducie, Tortworth Court, Gloucestershire—£210.
 28. Wild Eyes 25th, red and white, calved January 1, 1848; got by Second Cleveland Lad (3,408), d. Wild Eyes 12th. Mr. B. Baxter, Marsden Hall, Colne—£74 11s.
 29. Waterloo 11th, red and white, calved January 29, 1848; got by Second Duke of Oxford (9,046), d. Waterloo 4th. Mr. Eastwood, Burnley, Lancashire—£73 10s.
 30. Wild Eyes 26th, red, calved August 9, 1848; got by Second Cleveland Lad (3,408), d. Wild Eyes 5th. Mr. Haigh, Cameron Bridge, Fife—£31 10s.
 31. Duchess 61st, red roan, calved August 19, 1848; got by Second Duke of Oxford (9,046), d. Duchess 51st. Lord Feversham, Duncombe Park, Helmsley—£105.
 32. Duchess 62nd, red and white, calved October 10, 1848; got by Second Duke of Oxford (9,046), d. Duchess 56th. Mr. H. Champion, Ranby, East Retford—£126.
 33. Oxford 9th, roan, calved October 27, 1848; got by Third Duke of York (10,166), d. Oxford 2nd. Mr. A. L. Maynard, Marton-le-Moor—£42.
 34. Wild Eyes 27th, roan, calved December 8, 1848; got by Second Cleveland Lad (3,408), d. Wild Eyes 17th. Mr. N. Cartwright, Haugham, Louth—£45 3s.
 35. Cambridge Rose 6th, roan, calved December 11, 1848; got by Third Duke of York (10,166), d. Cambridge Rose 5th. Mr. Harvey Combe, Cobham Park, Surrey—£73 10s.
 36. Oxford 10th, red and white, calved December 30, 1848; got by Third Duke of York (10,166), d. Oxford 5th. Mr. L. G. Morris, Fordham, New York, U. S.—£53 11s.
 37. Wild Eyes 28th, roan, calved January 14, 1849; got by Second Cleveland Lad (3,408), d. Wild Eyes 16th. Mr. E. Bates, Cloden, Prussia—£27 6s.
 38. Waterloo 12th, red, calved January 15, 1849; got by Third Duke of York (10,166), d. Waterloo 4th. Mr. A. Cruickshank, Sittyton, Aberdeen—£44 2s.
 39. Wild Eyes 29th, light roan, calved August 3, 1849; got by Third Duke of York (10,166), d. Wild Eyes 19th. Lord Feversham, Duncombe Park, Yorkshire—£39 18s.
 40. Waterloo 13th, roan, calved August 8, 1849; got by Third Duke of Oxford (9,047), d. Waterloo 9th. Mr. W. Hay, Shethin, Tarves, N. B.—£74 11s.
 41. Duchess 64th, red, calved August 10, 1849; got by Second Duke of Oxford, (9,046), d. Duchess 55th. Earl Ducie, Tortworth Court, Gloucestershire—£162 15s.
 42. Oxford 11th, dark roan, calved August 25, 1849; got by Fourth Duke of York (10,167), d. Oxford 6th. Earl Ducie, Tortworth Court, Gloucestershire—£131 5s.
 43. Oxford 12th, light roan, calved August 27, 1849; got by Fourth Duke of York (10,167), d. Oxford 4th. Lord Feversham, Duncombe Park—£85 1s.

44. Wild Eyes 30th, calved December 4, 1849; got by Third Duke of Oxford (9,047), d. Wild Eyes 7th. Mr. G. Townshend, Sapcote Fields, Hinckley—£24 3s.
 45. Cambridge Rose, 7th, red, calved December 29, 1849; got by Third Duke of York (10,166), d. Cambridge Rose 5th. Mr. J. H. Downs, Grays, Essex—£26 5s.
 46. Oxford 13th, roan, calved January 7, 1850; got by Third Duke of York (10,166), d. Oxford 5th. Mr. J. Becar, Smithtown, Suffolk County, New York, U. S.—£66 3s.
 47. Foggathorpe 6th, light roan, calved January 8, 1850; got by Third Duke of Oxford (9,047), d. Foggathorpe 4th. Mr. Gardiner—£31 10s.
 48. Oxford 14th, roan, calved March 1, 1850; got by by Third Duke of York (10,166), d. Oxford 2d. Mr. J. H. Downs, Grays, Essex—£21.
- BULLS.
1. Second Duke of Oxford (9,046), roan, calved August 26, 1843; got by Duke of Northumberland (1,940), d. Oxford 2d. Earl Howe, Gopsal, Atherstone—£110 5s.
 2. Duke of Richmond (7,996), roan, calved August 8, 1844; got by Second Cleveland Lad (3,408), d. Duchess 50th. Mr. A. L. Maynard, Marton-le-Moor, Ripon—£126.
 3. Lord George Bentinck (9,317), roan, calved April 29, 1845; got by Second Duke of Northumberland (3,646), d. Wild Eyes 2d. Mr. Annett, Widdrington, Northumberland—£29 8s.
 4. Third Duke of Oxford (9,047), roan, calved October 9, 1845; got by Second Duke of Northumberland (3,646), d. Oxford 2d. Mr. J. Robinson, Clifton, Olney—£64 1s.
 5. Third Duke of York (10,166), red, calved October 31, 1845; got by Fourth Duke of Northumberland (3,649), d. Duchess 51st. Mr. G. D. Trotter, Bishop Middleham, Perry Hill—£74 11s.
 6. Euclid (9,097), roan, calved December 13, 1845; got by Second Cleveland Lad (3,408), d. Foggathorpe 4th. Duke of Sutherland, Trentham, Staffordshire—£42.
 7. Refiner (10,695), roan, calved April 11, 1846; got by Second Cleveland Lad (3,408), d. Wild Eyes 8th. (Not returned home from hire.)
 8. Fourth Duke of York (10,167), roan, calved December 22, 1846; got by Second Duke of Oxford (9,046), d. Duchess 51st. Earl Ducie, Tortworth Court, Gloucestershire—£210.
 9. Chevalier (10,050), roan, calved August 23, 1847; got by Second Cleveland Lad (3,408), d. Foggathorpe 2d. Mr. Pullen, Borobridge—£43 1s.
 10. Parrington (10,590), red and white, calved December 16, 1847; got by Second Cleveland Lad (3,408), d. Wild Eyes 15th. Mr. Fisher—£25 4s.
 11. Grand Duke (10,284), red, calved February 14, 1848; got by Second Cleveland Lad (3,408), d. Duchess 55th. Mr. W. Hay, Shethin, Tarves, N. B.—£215 5s.
 12. Chieftain (10,048), roan, calved August 11, 1848; got by Second Cleveland Lad (3,408), d. Foggathorpe 2d. Rev. W. F. Wharton, Barningham, Yorkshire—£43 1s.
 13. Red Rover (10,692), red, calved September 26, 1848; got by Second Cleveland Lad (3,408), d. Wild Eyes 8th. Mr. E. Bates, Cloden, Prussia. £36 15s.
 14. Beverley (9,964), red and white, calved October 1, 1848; got by Second Earl of Beverley (5,963), d. Oxford 4th. Mr. G. Townshend, Sapcote Fields, Hinckley—£32 11s.
 15. Ebor (10,184), light roan, calved January 31, 1849; got by Third Duke of York (10,166), d. Foggathorpe 4th. Lord Feversham, Duncombe Park, Yorkshire—£94 10s.
 16. Balco (9,918), red and white, calved February 23, 1849; got by Fourth Duke of York (10,167), d. Wild Eyes 15th. Earl of Burlington, Holker Hall, Milnthorpe—£162 15s.
 17. Retriever (10,707), light roan, calved August 12, 1849; got by Third Duke of Oxford (9,047), d. Wild Eyes, 8th. Earl of Carlisle, Castle Howard, Yorkshire—£52 10s.
 18. Duke of Athol (10,150), red, calved September 20, 1849; got by Second Duke of Oxford (9,046), d. Duchess 54th. Mr. Parker, Yanwath Hall, Penrith—£42.
 19. Fifth Duke of York (10,168), white, calved October 21, 1849; got by Second Duke of Oxford (9,046), d. Duchess 51st. Mr. R. Bell, Kirklevington, Yarm—£33 12s.
 20. Sixth Duke of York (10,169), red and white, calved December 10, 1849; got by Third Duke of York (10,166), d. Duchess 56th. (Dead.)
 21. Crusader, white, calved January 10, 1850; got by Second Duke of Oxford (9,046) d. Wild Eyes 21st. Mr. Blackstock—£42.
 22. Wonderful, red and white, calved January 12, 1850; got by Second Duke of Oxford (9,046), d. Wild Eyes 15th. Mr. H. Smith, The Grove, Bingham, Notts. £31 10s.
- SUMMARY OF THE SALE.
- Duchess Tribe.*—Total number sold 14, amounting to £1,627 10s. Average per head, £116 5s.
- Oxford Tribe.*—Total number sold 13, amounting to £894 12s. Average per head, £68 16s. 4d.
- Waterloo Tribe.*—Total number sold 6, amounting to £357. Average per head, £59 10s.
- Cambridge-Rose Tribe.*—Total number sold 3, amounting to £147. Average per head, £49.
- Wild-Eyes Tribe.*—Total number sold 25, amounting to £1,203 6s. Average per head, £48 2s. 7½d.
- Foggathorpe Tribe.*—Total number sold 7, amounting to £328 13s. Average per head, £46 16s.
- Grand total, £4,558 1s. 0d.
- General average, £67 0s. 7d.
- DIFFERENCE BETWEEN SELLING MILK AND BUTTER.—Fifteen quarts of milk to a pound of butter, is the common calculation, though in a large dairy, it is more likely to take more than less. In one case, 700 quarts made 36 pounds, which is 19½ quarts to the pound. It sold for 25 cts. a pound, making \$9. The milk, at 2 cts. a quart, would be \$14, which is the usual price that Orange-county farmers get, we believe.

SEBRIGHT BANTAMS.

THIS is one of the smallest and most beautiful varieties of the Bantam fowl, and is said to have originated with Sir John Sebright, of England. Dixon humorously says of the cock: "His coat is of a rich, brownish-yellow; almost every feather is edged with a border of a darker hue, approaching to black. His neat slim legs are of a light, dull-lead color; his ample tail is carried well over his back. His dependent wings nearly touch the ground. He is as upright as the stiffest drilled serjeant, or more so, for he appears now and then as if he would fall backwards, like a horse that over-rears himself. His full, rose comb and deep-depending wattles are plump and red; but their disproportionate size affords a most unfortunate hold for the beak of his adversary; but he cares not for that, a little glory is worth a good deal of pecking and pinching, and it is not a slight punishment, nor a merely occasional infliction of it that will make him give in. The great hens, too, that look down upon him, and over him, think proper to battle with him on a first introduction, though they afterwards find out that they might as well have received him in a more feminine style."



SEBRIGHT BANTAMS.—FIG. 69.

The hens are rather smaller in proportion to the cock than usual among the Bantams, but their plumage is nearly the same; they are good layers, steady sitters, and most kind and affectionate mothers. The chicks are dark-brown when first hatched, and hardy and easily raised.

The Sebright Bantams may be well called the minikin of fowls. Their diminutive size is really extraordinary—we have occasionally seen them not much larger than a pouter pigeon. In passing an aviary not long since, where they are kept, we were quite amused at the colloquy of a countryman—a green arrival from Yankeedom. A proud high-spirited little fellow perched on the top of a coop was crowing away to every by-passer lustily enough: "Cock-a-doo-dle-du-u-e." "Why, you don't say so," said he, arrested with evident surprise at the shrill, consequential challenge of Mr. Minikin. "Now du tell, will yer, my little bossy calf, whether you ra-ally be a rooster or a quail?"

"Cock-a-doo-dle-doo," and a smart proud flap of the wings, with a comical wink of the eye, was the gallant Sebright's prompt reply. "Oh, ho! then you be a ra-al rooster man, heh? Why, I kinder thought, like Ginerall Tom Thumb, you had just a cleared your shell, and been stuck over with feathers to make a show here, you little winky—" "Cock-a-doo-dle-doo, cur-ragh-r-r-r," with a ruffle of his hackle feathers, showing fight, was Sir Bantam's bold response. "What's that you say, Mr. Peppercorn?—and mighty little at that," continued Greeny, knocking off his hat, and stooping down, with his hands on his knees, and laughing contemptuously in Sebright's face. As quick as thought the Bantam jumped and caught him by the fore-top, and commenced whipping him over the eyes with his wings, greatly to the countryman's annoyance, and the amusement of a crowd of spectators. However, nothing daunted, Mr. Not-quite-so-greeny-now, gently closed the Bantam's wings, took him in his hands, and, holding him up admiringly at arm's length, exclaimed, "Wal, you be *some* in spunk, anyhow, old feller, mighty little as I took you for in body. So I guess I'll buy you and wifey, too; I've long wanted sumthin' to clear my farm of hawks and eagles, and I guess now you'll do it for me, old war hoss, and no mistake—I'm sartin ye would, if you was oney half as stout as ye be brave." So without the slightest hesitation, he paid the high price asked for the pair, chuckling as he did it, half as loud as the Bantam had crowed, and walked rapidly off with his fowls, and we saw no more of him.

A PLOW FOR WET MEADOWS AND ROOTY LAND.

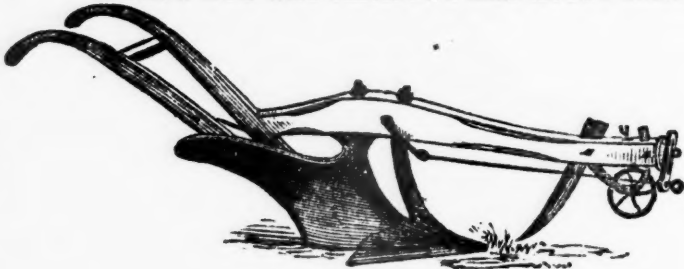


FIG. 70.

THE above is a cut of a large four-horse plow, called the sward D. It is made especially for cutting the roots of recently-cleared forest land, and breaking up swamps and wet meadows after draining. It has a movable lock coulter, fastened from the centre of the beam, strongly into the point of the share. This will easily sever roots over two inches in diameter, and cut through the fibrous net work of the stoutest grass. For rooty uplands, the plow share should be made the usual width of wrought iron, steel edge. This is not near so liable to break as a cast-iron share. For wet meadows, the share should be extra wide, of wrought iron, and steel edge. This enables the plowman to turn over flat, a very wide furrow. When thus turned, the sod decomposes much more rapidly, and almost entirely prevents the growth of grass or weeds. It is best to plow such meadows in the driest time, during the months of September or

October; and the following spring, just previous to planting or sowing, lightly harrow lengthwise with the furrows. In plowing wet meadows, in addition to the lock coulter, some use a reversed cutter, inserted near the end of the plow beam, just back of the wheel, as shown in Fig. 70. The object of this is, to cut the sod quicker and more perfectly than the lock coulter is able to do it. The wheel can only be used in tolerably level and smooth land.

A draft rod is attached to the centre of the beam of the sward D plow, (as shown in the cut,) which will bear a much stronger pull than an ordinary clevis. This rod passes through a crane, or dial clevis, which regulates the depth of plowing; it can also be gauged at any given distance from the side of the beam, thus enabling the off ox or horse to keep clear of the *miry open furrow*, so *fatiguing* to him, and tread on the *firm unbroken ground*. This renders it comparatively easy work for the team, and obviates the great objection to breaking up wet meadows. It also enables the plowman to run close along side of a fence or ditch, and thus plow the entire surface of the field. The price of this plow varies from \$12 to \$18.50, according to the fixtures required.

THE MUSK DUCK.



THE MUSK DUCK.—FIG. 71.

THE musk duck, (improperly called Muscovy duck,) so termed from the strong scent of musk which its skin exhales, is undoubtedly the type of a genus very distinct from that of the common kind. In this species, the feathers are large, lax, and powdery; the cheeks are extensively naked, and the base of the bill is carunculated. This duck greatly exceeds the ordinary kind in size, and the male is far larger than the female. The general color is glossy blue-black, varied more or less with white; the head is crested, and a scarlet fleshy space surrounds the eye, continued from scarlet caruncles at the base of the beak. Tail destitute of the curled feathers so conspicuous in the tail of the common drake. In a wild state, the drake is of a brownish-black, with a broad white patch on the wings, the female being smaller and more obscurely colored. But in a state of domestication, it exhibits every variety of color, like the common duck.

The tropical regions of South America are the native country of the musk duck, which may account for its dislike to a cold bath in our northern climate. Its frizzled crest is analogous to that of some curassows, natives of the same

continent. It is fond of warmth, passing the night, at the north, not in the open air, but in the fowl house with the cock and hens; and selecting by day, the most sunny corner to bask and doze in.

"Can a duck swim?" is a pert question sometimes asked with little expectation of an answer in the negative. Here, however, is a duck, which, if it *can* swim, performs that action in such a clumsy way as hardly to deserve the name of swimming. Those who expect that its singular appearance would render it a curious, if not an elegant companion, among our more attractive ducks, will be disappointed; for it will never go near the water, if it can help it, but will prefer the farmyard, the precincts of the kitchen, or even the piggery itself, to the clearest stream that ever flowed. In fact, it hates water, except some dirty puddle to drink and drabble in. When thrown into a pond, it gets out again as fast as it can. It does, indeed, sometimes seem to enjoy an occasional bath, and so does a sparrow or a Canary bird. Its very short leg does not appear to be mechanically adapted for the purpose of swimming. It waddles on the surface of a pond as much as it does on dry land; it is evidently out of its place in either situation. Its proper mode of locomotion is through the air; its congenial haunts are among the branches of trees.

The female of the musk duck has considerable powers of flight, and is easy and self-possessed in the use of its wings. It is fond of perching on the tops of barns, walls, &c. Its feet appear, by their form, to be more adapted to such purposes than those of most other ducks. If allowed to spend the night in the hen house, the female will generally go to roost by the side of the hens, but the drake is too heavy to mount thither with ease. His claws are sharp and long; and he approaches the tribe of "scratchers," (rasores,) in an unscientific sense, being almost as dangerous to handle incautiously as an ill-tempered cat; and will occasionally adopt a still more offensive and scarcely describable means of annoyance. He manifests little affection to his female partner, and none towards her offspring. The possession of three or four mates suits him and them, better than to be confined to the company of a single one. He bullies other fowls, sometimes by pulling their feathers, but more frequently by following them close, and repeatedly thrusting his face in their way, with an offensive and satyr-like expression of countenance; or salaciously pursuing them, whether male or female, until he has accomplished his purpose, or at least, has made an attempt.

The musk duck, though a voracious feeder, is easily fattened, a prolific breeder, and consequently, may be profitably reared. The male pairs readily with the common tame duck, producing, by the union, a hybrid, or mongrel, which is incapable of "breeding in a line." The female, however, will pair with the common drake and produce a good sort. The hybrid generally has a deep-green plumage, and is destitute of the red caruncled membrane on the

cheeks, as well as of the musky odor of the gland on the rump.

The eggs are scarcely distinguishable from those of the common duck, and are well flavored. The time of incubation is five weeks; but in all birds that I have observed, the duration of that period varies so much according to circumstances, that a mean of many observations must be taken to arrive at a correct standard. The time required by the hybrid egg, between this and the common duck, is intermediate between the respective periods.

The newly-hatched young, also, resemble those of the common tame duck; they are covered with down, the shades of which indicate the color of the future feathers; and they do not for some time, show any appearance of the tuberculated face. They are delicate, and require some care while young, but are quite hardy when full grown. Their food should be anything that is nutritious, both plenty and a variety of it.

The musk duck is excellent eating, if killed just before it is fully fledged; but it is longer in becoming fit for the table, than the common duck. The flesh is at first high-flavored and tender, but an old bird would be rank, and the toughest of tough meats. It is strange that a dish should now be so much out of fashion as scarcely ever to be seen or tasted, which, under the name of Guinea duck, graced every feast in England, a hundred and fifty years ago, and added dignity to every table at which it was produced.—*Browne's American Poultry Yard.*

A SPECIMEN OF AGRICULTURAL KNOWLEDGE— ARE CORN COBS GOOD MANURE?

This question was lately put to me by a gentleman at Jackson, North Carolina. I answered yes, of course; that I considered them highly valuable, &c. To this, another man put in an objection. He cautioned the first person not to use them too freely. If he did, he would not make any corn; "because," said he, "I tried them last season, and where I put them on thickest, I lost all my corn."

"Ah! how do you account for that?" said I.

"Oh! easy enough. *There is so much lime in cobs, it burnt up the land so that the growing corn all died.*"

"So much lime in cobs!" I exclaimed; "Well, that is new to me. Are you sure that was the cause?"

"Oh, yes; certainly. What else could it be? I don't believe much in lime, no how."

"Perhaps you did not plow your cobs in deep enough. What kind of land was it?"

"Well, it was good strong clay land, and they were plowed as deep as we ever plow in this country. How deep would you have plowed?"

"Ten or twelve inches?"

"Ten or twelve inches! Well, I don't want you to plow my land. You'd turn the soil all under so deep it never would do any good again."

My dear Sir, I would not only plow that deep, but I would use the subsoil plow, also, and then I don't think that the *lime in corn cobs* would hurt your land."

"You may talk as much as you like, but I know it was the lime in the cobs that killed my corn; and lime will kill any land in this climate; and as for a subsoil plow, I wouldn't let you bring one on my farm; and I don't believe they were ever of any benefit to land in the world."

"What sort of plows do you use, my friend, and how much team to a plow?"

"Why, the common sort of plows in this country; and I never want any plows on my land that one horse can't pull. I've seen enough of your new-fangled Yankee plows—I b'lieve they're just poison to the land, I do; and as for plaster and guano, that you talk so much about, I've tried both and they a'n't worth a cent; no, nor lime either."

Now, I pray you to take notice that this wise man is not only a farmer, but he is an overseer—one who hires for high wages—lets himself and his knowledge and skill to another; sets himself up as a competent teacher of the right mode of farming, manuring, and managing land; and, as you see, understands "agricultural chemistry," about upon a par with nine tenths of his class; and yet this man has charge of an estate that is probably worth seventy or eighty thousand dollars. How can a country improve when nearly all the agricultural operations are conducted by just such bigoted ignoramuses as this man—men that ridicule the idea of learning about farming in a book. And not only that, but when such men as the Messrs. Burgwyn's are conducting their enlightened operations right before their eyes, and, by means of lime, turning old broom-sedge fields into the most luxuriant clover pastures, they not only ridicule them because the first "crops don't pay cost," but contend that lime and deep plowing will ruin any land. How can you teach a man agricultural science, that contends that "lime in corn cobs" killed his corn, and who never reads an agricultural book or paper? S. R.

REMEDY FOR DISEASED SWINE.

A FEW years since, I had a sow with a litter of pigs, one or two days old, taken suddenly sick. When first discovered, she was lying on her side, and would neither eat nor take any notice of her pigs, even when disturbed. I had no expectation of her living one hour, and being no doctor, knew not what to do for her; but having a little croton oil in the house, (the quantity I do not know precisely, as it was nearly all used, except what adhered to the vial, perhaps three or four drops or more,) I mixed it with milk, rolled her on her back, and poured it into her mouth. In two hours, she was on her feet, and in three days, apparently as well as ever. I have given the same kind of oil to hogs that were sick since that time, and believe they have, in all cases, recovered, but in no case with so marked effect, as in the above.

SHELDEN ESBORN.

Harwinton, Ct., June, 1850.

COTTON BATTING, spread very thin over the young plants will shield them from depredations.

REVIEW OF THE JUNE NUMBER OF THE AGRICULTURIST.

Manures—The Food of Plants, is the first article, the sentiments of which I fully agree with. Yes, and besides the thousands of farmers who live near towns where they could obtain "food for plants," in exchange for food for people, there are a thousand other farmers, who live near farms where a vast amount of the same kind of material now goes to waste. How often we see the very essence of the manure pile, upon the few farms, which, by chance, it is sometimes piled, running down some gutter or stream, to furnish food for frogs instead of plants! How often we see piles of unused, spent ashes, lying year after year, keeping company with an ancient pile of rotten chips, that are furnishing food for fat dungworms, instead of a thriving young orchard; for which their can be no better manure. Spent ashes are valuable on account of containing phosphates, lime, magnesia, and silex, in the exact condition that the plants require for food. But the greatest of all waste, probably, about a farm, is in the temple of Cloacina; for there is deposited the very elements that formed the food of man, and should go again to form the food of plants, which in their turn, the human food would reproduce. Bones are wasted upon all farms, and the reason that I have heard given, was, "no way to grind them." Save your ashes, my friend, and make ley and boil them to pieces; or buy a few shillings' worth of potash to do it with. I assure you, it will not hurt your land. Or you can reduce them with sulphuric acid or steam; do not waste them. Remember, if you give food to your plants, they will give food to you. I was in Kentucky the other day, and on my way to Lexington, I stopped a few minutes to look at the farm of my old friend, Thomas Gregg, and while there, measured stalks of blue grass five feet long. Do you think that grew upon a poor starved soil? Such grass as that, in some fields I have my eye on, as I look out in the direction of the blue waters, would make the owners look blue with fright to see such a phenomenon. And so would a sight of some of the Kentucky cattle upon those same blue-grass pastures.

Silk Cocoons.—You say "those you wish to reel may be left in the hot sun a day or two, or a few hours in an oven, &c.," clearly inferring that the sun would kill the chrysalides. It will do no such thing. You might as well try to kill an African negro, by exposing him to the sun. If placed in a tight, glass box, or room, the sun will kill them, and not otherwise. You should have told how to keep the eggs after they are deposited upon the paper; as they will hatch in a few days unless put away in a very cool cellar or ice house; though I have known them kept by laying the sheets of paper between the folds of a linen sheet, and wrapping that in a woollen blanket, and packing in the bottom or centre of a trunk of clothing.

English and American Husbandry.—One sentence in this article speaks of the estimate of cost of putting in and harvesting an acre of wheat upon the Illinois prairies, as calculated by the

writer in Blackwood, at seven dollars. This I think too high; though I have no knowledge upon that subject. But I am sure the amount of labor bestowed upon land, generally, in preparing it for seed, is as much below the proper medium as it is above the mark in England. Your correspondent says an American farmer would plow the land equally well with half the time and team. Doubtful. No doubt with a pair of our light, quick horses, and such a plow as the last one I bought at your warehouse, an acre would be plowed quicker, but not better than English plowmen generally do their work.

Cultivation of Timber may do upon land "too poor for cultivation." But keeping vast tracts of fertile lands encumbered with timber, instead of bearing wheat and corn, is poor economy. What if you do depend upon some other country for rail timber, are you poorer for it? On the contrary, where the facilities of transportation are great, the land is worth more without timber than with, everywhere, and particularly in Delaware. Unless the land that C. has planted with pines is absolutely worthless for cultivation, it would be economy to buy coal for fuel, instead of growing such miserable stuff as his pines are for that purpose. Growing chestnut timber may be done to good advantage, upon a thousand waste corners, nooks, and gullies upon many farms; but I never would plant pines upon a tillable soil, even if assured to live "to build a house from the timber."

Wisconsin Farming.—"This and the adjoining counties are fast filling up," &c. What do you call filling up? I recollect the "Western Reserve," as the north part of Ohio was then called, was fast filling up, thirty years ago; but it is not half full yet. The truth is, throughout all the great west, as soon as about one tenth of the choice locations are taken up, the cry is, "the country is filled up," and onward rolls the tide to some other "new country," until we have spread over an immense surface, and no part of it is full, nor fast filling up.

Experiments in Agriculture.—One of the reasons why experiments, particularly failures, are not given to the public, is because that same public have such a wicked disposition to laugh at and ridicule every "experimenting farmer." If a merchant retires from business with a competency, or even an *old sea captain* who has saved a few spare sharks' teeth, for future use, is disposed to spend his money in experiments upon a farm, he at once becomes the butt of ridicule among all who aspire to be considered farmers, in the neighborhood. It is a melancholy truth that a large portion of those who depend entirely upon the soil for support, seem as though they hated everything and everybody that offer to make any innovation upon "the good old rule" that guided their ancestors, and is good enough to guide them. And as though the obstacles to deter experimenters from giving their experience were not already enough, "Coke" must throw in a few more. He tells them they must make a careful analysis of the soil, seed, and labor, and detail everything with the accuracy of a chemist in his laboratory. If

he expects us to do that, he will be very much mistaken. He must take things in the rough, or not at all. Just such as the article upon the

Cultivation of Potatoes.—If this writer had been required to go into all the minutiae, we never should have seen the result of his experiments. Just such another article is that entitled

Value of Seaweed as a Fertiliser.—These are the kind of experiments that a farmer can easily make, and should make, and should report for the benefit of those engaged in the same pursuit.

Manures, No. 1.—The writer says "manures, when judiciously applied, are the great sources of agricultural wealth;" and goes on to show that we all sprung from a dunghill, and cannot live without one. How shall this truth be impressed upon the minds of all who cultivate the earth, that every dollar expended in enriching the soil will pay him a greater interest than bond and mortgage. But I differ with the writer, somewhat, in the way that dollar shall be expended; whether in street manure, marsh mud, homemade compost, or in the purchase of more concentrated fertilisers. Let every farmer try experiments for himself, which is cheapest, the offal of the city, before it goes into the sea, or afterwards, in the form of mud, seaweed, fish, or guano; but let him resolve never to attempt the cultivation of land unless he uses something to make it rich, except when it is already as productive as art can accomplish.

Poultry Raising.—According to the estimate of Mr. Miner, the golden fortunes of some of the maniacs who have lately gone into the hen trade, are not quite so sure as they have counted upon—of course before the chickens are hatched. But still Mr. M. thinks "a fortune can be made on poultry." Let us see how. For my part, I do not believe it ever has, nor ever will be; and that any large outlay of capital with that expectation, will prove an addled egg.

Gapes in Chickens.—Facts stated in this article are good evidences that the most healthy situations for poultry are where the fowls run at large in open, new grounds; and that is about the only place where they are ever profitably raised, for then they get their own living, and live free from disease.

Value of Guano as Manure.—Is it necessary to go to England for facts to prove this? Have we none in America?

Profitable Dogs.—This writer need not draw upon imagination, as he has, to prove how profitable it is to keep dogs. The whole south and a large part of the north and west, are infested with dogs that kill more sheep than are killed by wolves. In fact, in some districts of Virginia, admirably adapted to sheep and wool growing, the business cannot be carried on for the dogs. There is but one way to rid the country of the contemptible pests, and that is to levy a tax upon all owners, and offer a premium for the scalp of every dog that has no owner.

Agriculture of New Hampshire.—I am pleased to see how philosophically this writer treats the jokes, pretty stale ones, too, some of them, that are said and sung about New-Hampshire rocks

and sterility. Notwithstanding the hard granitic soil, there is more grass grown there among the rocks, than some farmers in this Union ever thought of; and grown to good profit, too. If you doubt it, go and look at their sheep and herds of beautiful cows and serviceable oxen. I am pleased with the spirit of this writer, and hope we shall hear from him again. Give us some details of farming in your state. Let southern and western farmers, who complain of hard work to live upon thousand-acre farms, hear from you how many persons can live upon one of one tenth the size, and that, half rocks.

English Race Horses.—I have no objection to this race, nor proper trials of speed. But as things are, and have been long conducted in this country, I have become so disgusted with the very name of race horse, that I can no longer look upon the subject without prejudice. The racing stock of the United States, are notoriously deficient in the good points that constitute a good roadster or farm horse; and the race courses have generally become sinks of immorality, every way injurious to the community; and I would no sooner publish anything having a tendency to commend them, than I would any other manufactory of drunkards. Not that this article does approve of anything of the kind, but I am led into the train of thought by the title. By the by, I suppose it is copied from some English work—but who? What does "Rous" stand for? Some of us rough old farmers are extremely ignorant, and I think I have seen some complaints of your articles being stolen without due credit. Take care that you are not guilty of the same fault. ["Rous" is Lord Rous, the son of a distinguished nobleman, and related to many of the highest nobility of England. He is a great sportsman, and distinguished writer, like the celebrated late Lord George Bentinck, son of the Duke of Portland. In his line, Lord Rous is as well known as Dickens or Bulwer, in theirs, and it would look odd enough if we put more than an author's name to his production. Would the "captain" have us explain who William Shakspeare was, for fear his name at the foot of an article was not sufficient explanation of who wrote it?—Eds.]

Wasting Manures.—Why, I have seen a thousand worse cases than that, and have already spoken of several in the present review.

New and Highly-Improved Iron Horse Power.—"What a long tail our cat has got"—almost as long as this title. And then what a small picture for such a quantity of machinery. Up stairs and down stairs, in the barn and out of it; and if it had not been for a bush at the corner, we could see round behind the barn into the meadow, where that fellow is going to mow as soon as he gets the scythe done that he is grinding. I hope his grindstone has friction rollers—it will almost go of itself, then, and save all back and arm aches. But pray tell me honestly, is this as good a kind of horse power as those known as "the railway horse power, for a small farmer?"

The Princess Tribe of Shorthorns and the Portrait—Mr. Sheafe's Sale of Shorthorns.—Gentle reader, you recollect some comments I made upon a short-horned article in a former number, the meaning of which, from a note of the editor, seems not to be understood. I do not object to pedigrees in their proper places nor to this breed of cattle. It was only to the wordy war between breeders as to which was best, mine or yours. The article now under notice is a "calf of another color." It gives a brief history of this family of cattle for five centuries; and if you desire a more full one, look into L. F. Allen's American Herd Book, and you will find all the information you desire, and full satisfaction that this noble breed of cattle were not made at a single leap by a vile cross with a Galloway cow some sixty years ago. If they were, they have shown a miraculous improvement since; for they are nearly perfect now. Noticing in connection with this subject that Mr. Sheafe's herd were to be sold, I felt an itching curiosity to see them, particularly that bull, Exeter; and so I made an arrangement to meet my friend the senior editor of the *Agriculturist* one day, last week, at the farm at New Hamburg. As I hate railroads even worse than I do steamboats, I hitched old grey to the buggy, and after an easy day's drive of fifty-five miles, alighted at "High-Cliff Farm," where I found the head of our favorite journal, with coat off and stout boots on, turned farmer once more, and apparently as glad to welcome me at "High Cliff" as I was him at "The Valley," when he visited me last summer. So, after an evening stroll, and a good old-fashioned supper of bread and milk, flavored with extra large and luscious strawberries, and such a night's rest as one may have after such a day's work; and a breakfast of cold beef, fried potatoes, and sweet homemade bread and butter, and strawberries again, I gave this herd of cattle a thorough examination, and pronounce them just the very next thing to perfection for the rich clover fields of old Dutchess, or the blue-grass pastures of Ohio and Kentucky. But I shall not be persuaded by any of the ardent friends of shorthorns—and in this opinion, I am glad to say Mr. Allen agrees with me—to try them on the rocky hill sides that surround "the Valley." I stick to my Devons as best suited to that section of the country. I shall attend the sale, however. I would not miss it for a good deal, for I understand many of the best breeders in the United States will be there; and their criticisms of the herd and discussions on stock breeding will be worth listening to. I hope young farmers will take this into consideration and be there, too, as it is not often they will have so good a chance so easily to obtain information on the important subject of stock-breeding. The bull, Exeter is as handsome as some of the best I have seen in England; but I predict that he will not suit the majority like some great, coarse brute that stands "higher than my head," though I have no doubt the liberality that prompted Mr. Sheafe to import so fine an addition to the good stock in this country, will be responded to on the day of sale by

generous bids from the enlightened few. From the appearance of one of his calves I saw, I judge he will become the sire of some very valuable ones in due time. The improvement in stock is now onward, and the sale and dispersion of this herd will serve to give it a greater impetus.

If any one doubts the faithfulness of the portrait under notice, let him visit this farm and he will doubt no more.

I have made a longer notice of this article than I usually do, but to tell the truth, I have become deeply interested in these beautiful cattle, and were I on stronger land, I, too, would go in for a few on the day of sale. What a *big ship* I would sail then! but now I must be content with a *lighter craft*.

The Largest-Sized Wrought-Iron Plow, which you inquire for, I saw a few weeks since on my way to St. Louis. It is used to break up prairie, and is drawn by five stout yoke of oxen hitched to a pair of wheels, to which the forward end of the beam is fastened, which is fifteen feet long. The moldboard is of wood and the share is of wrought iron, weighing 150 lbs. and turns a furrow two feet wide. Is that the size you want? It certainly is the biggest one I know of, and if it suits, you are welcome to the information.

Mr. Robinson's Visit to Jehossee Island is interesting as his letters always are to your readers. Now, Mr. Editor, as I see he is in town, when are we to have the pleasure of *that visit* so long promised, at "the Valley?" My wife and daughters are dying with impatience to see "The Traveller."

Cheap Lands in Virginia.—Cheap enough, truly; but are they good for anything? Give us more particulars. Let the world have light. Not *Paine*-ful light—there is too much smell of bugs about that.

Deep Plowing.—How deep? Give us the inches, I should call about fifteen inches deep. Some persons call one third of that deep.

Look at a Scrap of Agricultural History, from Pennsylvania, ye sorrel growers and lime despisers.

A New Clover for the South is spoken of. It is all talk; it will not be raised by a people who hate everything of the name of grass.

Spaying Heifers.—No doubt it improves their quality for work, but did you ever once think that milch cows could be worked just as well as breeding mares, without spaying? [Very likely, but in our humble judgments it is asking too much of a poor cow to bring a calf once a-year, be milked ten months out of the twelve, and work all the while like an ox. May be she could do this, and may be she could not; at any rate, we are not inhumane enough to put a poor beast to the trial. When he wrote this, we opine the "captain" was thinking of what he had seen in his travels in rude Switzerland and Germany.—Eds.]

Yaupon Tea.—Sure enough, "what sort of tea" is that? Something that I have never dreamed of, nor seen in my travels. I have heard of a great deal of *yauping* over a tea table. If it is a kind that will produce any more *yauping*, I

shall beg to be excused from encouraging its cultivation.

Remarks on Diet.—These remarks are just like some others that I have heard characterised as “pearls.” Do you remember where they were “cast?” Before some animals that are about as regardless of their diet, as some of the fashionable gormandisers of this “enlightened age.”

Spent Tanners' Bark, a Good Manure for Strawberries.—So is any other spent wood. Nothing better than the fine chips from the wood pile, rotten leaves, or logs from the woods; though, for most people who have none of these conveniences, I would recommend a slight dressing of guano.

Green Vegetable Manure, “has been used for 2,000 years.” Yes, by Nature much longer than that, and will continue to be used, but man is so full of wisdom he thinks he can beat her.

Ah, this is where I am going to stop for a month, with Nature and those who love to read her book and your

REVIEWER.

SHRUBBY CINQUEFOIL.

THINKING that some notice of the *hardhack*, a very troublesome shrub, is desirable, I send you a short description of it and its habits.

Hardhack is applied in books to a species of spiræa, but in this region, it is given to the shrubby cinquefoil, (*Potentilla fruticosa*), which well deserves it. A warning voice is often raised against the Canada thistle, dock, and other noxious plants, but here we have one which is making its insidious but rapid advances upon us, and public attention has never been directed to it. Even Darlington's *Agricultural Botany*, treating of useful plants and weeds, contains no notice of it. This plant is a shrub sometimes growing four to five feet high, yet beginning to flower and produce seeds at the height of six inches. It is much branched, with a reddish bark hanging in loose scales and strips, resembling, both in color and appearance, that of the grapevine. Leaves pinnate or divided into 5-7 divisions, and, with the young branches, are covered with fine hairs. The plant is easily distinguished at a distance by its dark bluish-green appearance. It flowers from June to September, producing an abundance of small yellow flowers, similar to the common five-finger, (*Potentilla canadensis*), at the extremity of its numerous branches. It is a native of New England and the other northern states, and, as here, it chooses a cool, damp situation, I think no danger need be apprehended from it in the southern portion of our country.

The hardhack spreads entirely by its seeds, which are very numerous, and it is the most insidious of all the vegetable plagues which infest the farmer in this region. You will not notice it in any new position, unless care is taken, until it is so firmly established, as to be able to defend itself with considerable obstinacy. A few seeds dropped by birds or carried by the wind take root in a favorable locality, and in a few years, a numerous progeny is established around them. Then, they, literally “take the

field,” and as they never give up any position, they may take, except with life, and as they are never known to die of their own accord, well may the farmer be on the “look-out” for them.

Ten years from the establishment of a fort, is long enough for this shrub to spread over several acres; although it prefers a moist soil when it has obtained foothold, it will advance on that which is quite dry, seeming by its shade to keep the ground damp and favorable to it. Twenty-five years ago, it was scarcely known in this region; but now thousands of acres, which were then valuable pasture, are covered with it. Those lands, which, from their moisture or roughness are kept in permanent pasture, are its chosen fields of action.

In meadows, it is prevented from seeding and spreading by mowing, although the roots are not killed by the operation. Plowing, where practicable, eradicates it. Close pasturing, at all seasons, keeps it in subjection, for it rarely obtains much foothold in the highway, although the fields on both sides may be covered with it. Animals eat it sparingly, (as it is very bitter,) with other food, but they will starve on hardhack alone. I have seen where a common rail fence separated a field often plowed from the highway, the latter to be clean as well as the field, with the exception of the fence corners beyond the reach of the plow, where it was nearly as high as the fence and covered with seeds. Plowing where the land will admit, and pulling by hand, seem, as yet, to be the only effectual remedies applied to this pest. The latter is easily accomplished, if taken in season, for large bushes can be pulled without difficulty. And if any one observes a few of them by the side of the brook or marsh, make short work with them at once, as they will soon give you a long job; for here emphatically “a stitch in time saves nine.”

A thorough system of underdraining must accompany our other labors, or we shall be “driven from the field in disgrace. The use of the land, when covered by this plant, may be considered as equal to nothing, so that if the land can be made to yield more than the interest of draining and clearing, we may set that down as clear profit.

I would also propose that attempts be made to establish a growth of timber on lands occupied or threatened by it. Some of our valuable native forest trees might be planted, or perhaps the European larch, (which delights in a similar soil, grows rapidly, and is very valuable for timber,) might be introduced. T. S. GOLD.

Cream Hill, Ct., May, 1850.

HOW MUCH PORK WILL A BUSHEL OF CORN MAKE?

—By some experiments tried, it is believed that a bushel of corn, fed to a thrifty hog, will make 12 lbs. of pork. So that corn at 24 cts. is equal to pork at 2 cts., and corn at 72 cts. a bushel is equal to pork at 6 cts. a pound. The manure will more than pay for the labor of feeding and killing the hogs.

MR. ROBINSON'S TOUR—No. 20.

Benefits of Railroads to Agriculture.—Having given an article upon this subject, as illustrated by the New-York and Erie Railroad, I now propose to give another of similar character upon the South-Carolina Railroad, which connects the city of Charleston by three branches to one stem, with Camden, Columbia, and Hamburg, and thence to Augusta, Georgia, and all the Georgia railroads.

I left Charleston upon my tour of examination on the 14th. of February, which some of my readers at the north will perhaps remember as a severe cold day, while here it was mild and pleasant and free from snow, which never incommodes this road as it does some of those at the north. It is but an act of justice for me to say that I had been provided with a "free pass" by the president of the company, Colonel Gadsden, which I understood had been ordered by a vote of directors, in consequence of my connection with the American Agriculturist. I have some reason to believe that I owe this to my respected friend Colonel Wade Hampton. I certainly look upon it as a compliment to my labors in the cause of agricultural improvement, and a mark of high respect to the agricultural press.

Now, kind reader, if you please, let us journey together. We leave the Charleston Hotel, (one of the best in the Union,) in a large omnibus, which is worthy of notice and commendation, at nine o'clock, and drive about a mile to the depôt, principally along a plank road, recently laid down in King street, and though not quite equal to a "Russ pavement in the goodly city of New York," it is far better than the deep sands of Charleston. The neatness and order of the depôt is somewhat in contrast with that of Boston and other places; but the cars are pretty fair, and it is worthy of remark, that the conductors of all the passenger trains I was upon, (and I believe it comprises nearly the whole,) are among the most gentlemanly, well-bred, kind and accommodating officers of my acquaintance. At ten, we are under way; the Hamburg train ahead and the Columbia train following within half a mile, so that both are at Branchville at the same time. Along the first five or miles, we see a succession of vegetable gardens, but, few or no farm houses, for the reason that no white person can live out of the smoke of the city fires, during summer, on account of the extreme unhealthiness of the country.

The road now passes through an almost unbroken forest of flat, sandy, wet land, of pines and scrubby cypress, 62 miles to Branchville, where the Hamburg and Columbia trains part company. Thence to Hamburg is 74 miles and to Columbia 68 miles, with another branch, taking off 25 miles below Columbia, and 105 from Charleston, and running up to Camden, 37 miles, or in all, 142, the three branches making a total of 241 miles. From Columbia, there are two roads building, which will soon be in operation and produce a wonderful effect upon the agricultural industry of North and South Carolina.

One of these roads is to extend 109 miles to Charlotte, N. C., through a rich farming country,

far from navigable water, and the other one to Greenville, S. C., with its branches, will be 160 miles long, mostly through a rich cotton and corn country, and lately found to be very productive in wheat, and only wanting market facilities to make it a very productive and healthy farming region.

From the end of the Hamburg branch, the Georgia Railroad to Atlanta, 171 miles, and the Atlantic and Western Railroad, 138 miles to Chatanooga, making 445 miles from Charleston, in a direct line towards Nashville, Ten., are now in successful operation, and have already benefitted the rich agricultural region through which they pass more than the whole road has cost. From Branchville to Aikin, 56 miles, the quality of the soil and appearance of the country somewhat improves, and is more settled, though but sparsely. The traveller is constantly impressed with the idea that he is passing through the wild forests of some new country, instead of along one of the oldest railroads in the United States, and through one of the oldest states. From Charleston to Aikin, 118 miles, the road has one gradual rise, and is there 513 feet above tide water. Here we descend 176 feet down an inclined plane, 2,640 feet long, towards Hamburg, and down 197 feet more through 18 miles to that place, which is 140 feet above tide. Six miles from Aikin, we pass the neat little granite imitation gothic depôt of Granitsville, one of the most beautiful and flourishing manufacturing villages in the Union; which probably never would have been in existence if the railroad had not been previously built. This place is well worthy of a visit from every intelligent traveller, and offers strong evidence of the benefits of railroads to agriculture; for, where facilities of transportation are most convenient and cheap, unless the soil is unforbidding, it will be improved, and where manufactories are located and flourishing, there will agriculture be found most improving.

The trip from Charleston to Hamburg, 136 miles, is 8½ hours, and price of passage, \$5. This road was chartered in 1828, and in 1830 the first locomotive was put in operation. This was about the first application of steam upon railroads in the United States. In 1833, the road was opened to Hamburg, and was then the longest road in the world. This was the first railroad in the United States upon which the mail was transported.

The Columbia branch was commenced in 1838 and finished in 1842, and the Camden branch some years later. The following figures will show the increasing usefulness of the road:—

In 1834, the number of bales of cotton transported, was 24,567; in 1835, 34,760; 1836, 28,497; 1837, 34,395; 1838, 35,346; 1839, 52,585; 1840, 58,496; 1841, 54,064; 1842, 92,336; 1843, 128,047; 1844, 186,638; 1845, 197,657; 1846, 186,271; 1847, 134,302; 1848, 274,364; 1849, 339,996—showing an increase, in sixteen years, in this one article, of 315,429 bales over the number transported the first year. What a vast number of horses and men, the carriage of the last year, alone, would have withdrawn from cultivation, to trans-

port all these bales in wagons! The proportionate increase in some other things has been equally great.

In consequence of the facilities of getting turpentine to market, which formerly would not pay transportation by wagons, a few individuals began to levy contributions upon some of the valueless pine forests, and in 1846, the railroad brought down 48 barrels; in 1847, 3,189 bbls; in 1848, 5,753 bbls; in 1849, 13,918 bbls.

In 1849, 66,904 bushels of corn were carried, and 1,507 bbls. flour, though most of that was carried into instead of out of the country. But in the same year, 1,584 head of cattle, mostly beef, and 3,353 hogs, mostly fat, and 328 sheep, and 977 horses were carried; and 16,632 bales of domestic cotton goods were brought down from the interior factories; not one of which would have reached the sea shore, if this railroad had never been built.

The increase of amount received for freight has been upon the same scale. In 1834, the receipts for all freight was, \$83,214.44; in 1844, \$306,155.71; in 1849, \$621,990.32; in 1834, the number of passengers was 26,649, giving \$79,050.35; in 1849, the number was 92,713, and amount, \$223,325.42. The rate of charge for passage is four cents a mile for all distances under 125 miles, and five dollars for all longer distances.

These rates, so much higher than northern roads, are contended for, because, unlike those roads, this could gain no *way* passengers by lower fare, for the very good reason that they are not there to gain.

The rates of freight upon the lightest class goods, are eight cents per cubit foot; and upon boxes, bales, &c., 45 cents per 100 lbs. Upon coffee, sugar, pork, lard, and heavy articles, 25 cents per 100 lbs.

Upon all grain and seeds, (except oats,) in sacks, seven cents per bushel. Oats, five cents. Upon shovels, spades, scythes, brooms, &c., 25 cents per dozen.

Upon plows, wheelbarrows, cornshellers and straw cutters, 50 cents each.

Upon the very things, *particularly plows*, that should be carried almost *freight free*, the heaviest duty is levied. Upon a plow that costs only \$1.37½, at your store, in New York, and a sea freight of only 12½ cents, the farmer must pay *one third of its whole cost* to get it a *few miles* up the railroad. I call the attention of directors of this, and also other roads, to the policy of encouraging the farmers to use improved implements and fertilisers to increase their products, by offering to transport them at more nominal freights, and thereby ultimately increasing their own business profits, and greatly benefiting agriculture.

The freight charged for carrying a single horse or ox, is \$8. For two, \$12, for four, \$20, for ten, \$30, for twenty, \$50.

The road is well furnished with cars and engines, and the Columbia and Camden branches laid with T rails, of 35 to 56 lbs. per yard and the other part is being relaid with the same kind of rails, 51 lbs. per yard, so that the country has the

prospect of a good road, and if the directors will give them cheap freights, the benefits to agriculture incalculably will be great.

It is proper that I should remark that I am indebted to William H. Bartless, Esq., one of the polite gentlemanly officers of the company, most of the statistical information herein given.

I also had the pleasure and advantage of the company of the Hon. H. W. Conner, president of the company, upon a passage from Hamburg round to Columbia, and through his politeness learned much of the history of the road. The inclined plane has been a very expensive affair; it is now operated by a descending locomotive attached to one end of a wire cable, the other end being fast to the ascending train, and the middle working over a drum at the top of the hill. This plane could be avoided without difficulty.

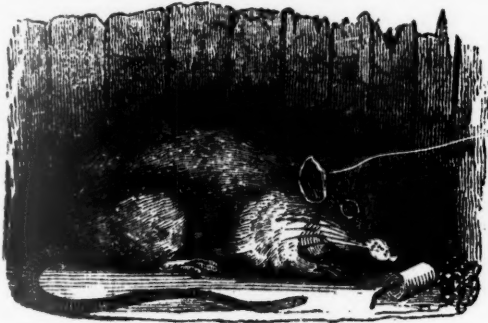
There are no rock excavations, deep cuts, nor high embankments, of any magnitude on the whole road; though there is some pretty long bridging across the Congaree River and Swamp. One of the most striking things noticed by a northern traveller, upon all southern railroads, is the difference in the appearance of the depôts and more particularly the way stations. However, it is only the natural difference between a white man and a negro. The difference between neatness and thriftiness, filth and dilapidation. It is a question of some importance in an agricultural point of view, what will be done or, if anything can be done, to reclaim all the waste lands that we see along this road, lying idle and unproductive, and in a great degree uninhabited and uninhabitable, on account of its malarious character.

In coming up from Charleston to Akin, we see nothing that looks like a hill; and upon the Columbia branch, none till near the Congaree, and only small patches of clearing, and but two or three unimportant towns. The mass of the land, in the lower part of the state, is in the forest, some of it thin sandy upland and some rich swamp that, if once drained, would be very productive in cotton, corn, potatoes, or rice.

The greatest drawback to improvement is the disposition of many persons to buy up all the land that joins them; as for example, my friend Major Felder, of Orangeburg, who boasts of owning fifty thousands acres. For what purpose he desires to accumulate such a vast tract of unproductive land, is past my comprehension—certainly not for his children—and I don't believe he will live long enough to saw up all the timber in his half dozen sawmills. Besides the unhealthiness, however, of a large portion of those lands, between Charleston and Akin, there is another thing to prevent their settlement and improvement by individuals. The country is so flat that it requires some great and general plan of draining, to free it from the surface water, in the first place, and this will not be undertaken so long as labor can be more profitably employed upon soils naturally more dry and rich. The fact is, there is entirely too much land in the United States for the present population.

RAT'S BANE, PROPERLY SO CALLED—A SETTLER FOR THE MILLION.

For the benefit of all who may hereafter fall victims to the rapacity of rats, I will now, as briefly as may be, lay before them my military tactics, and explain how I finally brought up my *corps de reserve*, which gained me a decisive victory. Instead of commencing hostilities at once, on discovering the extent of the ravages committed, I gave encouragement to the enemy, by throwing in his way divers articles of food, such as drippings, lard, meat, bones, fish, and other dainties. This gave him confidence, and threw him off his guard, so that he revelled unsuspectingly among all the good things of this life, while I was secretly plotting his destruction. I took care, meantime, to secure all the hen houses, and shut the inmates up every night, to protect them from their blood-thirsty foe. The great field day was Friday last, a day I shall long remember—I devoted entirely to stratagy. *Nil actum reputans si quid superesset agendum*, [Thinking that nothing was done if anything remained to do], I completed all my arrangements before the hour of dusk, impatiently waiting for the rising sun of the morrow. Poison was my weapon; fresh herrings and sprats were my aid-de-camp. The poison was carbonate



THE COMMON BROWN RAT. FIG. 72.

of barytes, ground to an impalpable powder, and phosphorus. An incision was first made in the backs of the herrings, and the carbonate of barytes well rubbed in. The parts were then, as artistically as possible, reunited. The sprats being smaller than the herrings, and more plastic, were pierced through their sides with a sharp piece of deal wood. Had a knife, a fork, or the human hand touched them, all would have been vain. The barytes was then "drilled in," and other sprats not poisoned, were placed above and below them, so that the suspicion was disarmed. "*Latet unguis in herba!*" [There was a snake concealed in the grass]. It should be borne in mind that the barytes is without taste and without smell; hence its great value. The way in which I applied the phosphorus would take more space to detail than you can well afford in one number of your paper. At a future time, I will gladly furnish particulars of this, and other interesting matters, connected with my recent experiments, for I have been both a "sapper" and a "miner."

When the preparations were all completed, I stationed my trusty messengers in every part of the garden and shrubberies—some under trees, some in flower pots, some hidden by a brick, others partly imbedded in the garden walks, &c.

They "did their bidding" right bravely. On coming down stairs, the morning following, I found the enemy had fallen into the snare. There was a serious diminution of the provisions furnished for their repast, and the hand of death was observable on every side. They had eaten ravenously; they had been seized with cruel thirst; they had sated themselves with water; they had "burst their boilers!" To use an expressive, and most appropriate classical quotation, there was a visible "*Decessio pereuntium—successio periturorum*," which clearly proved I had won the day. In a word, two days and two nights had effectually routed the whole army, and I was left master of the field. If it be urged by some, as perhaps it will be, that I am cruel, consider the aggravation, an unprovoked and brutal attack upon a large affectionate family of sleeping innocents, who were ruthlessly snatched from their beds at midnight, torn limb from limb, and their agonised bodies crunched; aye, crunched is the word, between the fangs of murderous assassins. Oh! "had they ten thousand lives, my great revenge has stomach enough for them all."—*Agricultural Gaz.*

PACKING ESTABLISHMENT OF THE MESSRS. FRAZER.

THESE gentlemen have one of the most extensive and complete pork-packing establishments, at Chillicothe, there is to be found in the United States. "It is capable," says the Chillicothe paper "of scalding or singing 1,200 hogs per day; and ample celler room for curing this great number, in the mode adopted by the owners during the last two years, for the English market. But the thing that struck us, most forcibly, was the method here adopted of *saving*, and putting to *practical use and profit*, every part of the entire hog.

"First, the blood is carefully saved and barrelled, for the use of the salt manufacturer; the hair and bristles are sold to mattress and brush makers; the offal is cooked immediately, in a large tub for the purpose, and fed to stock hogs. The heads and feet, as soon as taken off, are put into immense tanks for the purpose, and steamed sufficiently, when the lard is drawn from the tap, and used in the manufacture of soap of every variety; the condensed steam drawn from the bottom, amounting to several hundred pounds, daily, is converted into glue. The leaf lard is carefully and cleanly handled, cooked in twelve large kettles, and has, we understand, when manufactured, a reputation both in England and the United States, second to none in either country.

"Attached to an immense boiler is a beautiful engine, that drives circular saws, a cornmill, planing machine, grindstones, and any number of pumps, besides forcing water to every part of the establishment. Here we saw a kettle containing 12,000 lbs. of soap in the process of making, and were told that three days were required to make a boiling; that the usual quantity made was about 24,000 lbs. per week, besides a sufficient quantity of soft soap, to supply the home demand. In one of the cellars are screw presses of 80 tons power, where

tallow is subjected to a *squeeze*, before being manufactured into candles for summer use; and leaf lard to the same process, for the oil it contains, as well as the increased value it gives to the lard.

"If the idea should suggest itself to any one—wherein lies the particular benefit of such an establishment—we would merely state that the farmers of our country are enabled to get remunerating prices, *at home*, for 20,000 to 50,000 hogs per year; and that 100 to 130 laboring men find employment, during five or six mouths of the year, at good wages and 20 to 30 during the whole of the time; requiring an expenditure, in cash alone, which is distributed throughout the county, of over \$200,000 annually."

Superior Hams.—The hams cured at this establishment are the finest we have ever eaten in the United States. Indeed, we do not consider them at all inferior to the best Westphalia, to be found in the London market. They are mild, tender, juicy, and of a flavor peculiarly agreeable to the palate.

The Messrs. Frazer inform us that they find it rather difficult to obtain hams from the swine now raised at the west, sufficiently lean and tender for choice curing. The breeds now reared there by the farmers, lay on too much fat in proportion to the lean, to make a first-rate ham. They have consequently determined to go into the rearing of the Berkshire breed of swine, themselves, expressly for this purpose. They find that the Berkshires make more lean, tender meat, in their hams, in proportion to their size, than any other breed whatever. Of this, we assured the public from our own experience, over and over again, years ago; but they were too careless or credulous to pay attention to what we then said, and the result is, that pure Berkshires are now comparatively scarce in the country. We are of opinion that the western farmers, particularly, will soon find it for their own interest to revive them.

TO COUNTRY GENTLEMEN.

It has always been a matter of surprise to us, that the gentlemen of the United States do not pay more attention in adorning their show grounds with fine, high-bred animals, of different kinds and breeds. Our Creator did not leave Eden thus desolate; but after adorning it with every plant, and shrub, and tree, bearing fruit and flower, he also stocked it with "every beast of the field, and every fowl of the air; and brought them unto Adam to see what he would call them." "And Adam gave names to all cattle, and to the fowl of the air, and to every beast of the field;" and we have no doubt, that, with himself and the beautiful Eve, it was one of their chief delights to surround themselves with this living creation of beasts and birds, in their daily rambles through the exquisite parks and gardens of Eden, and to watch over and care for them.

Among the noblemen and gentlemen of Europe and their accomplished ladies, this is ever the case; they would think their parks and show grounds desolate enough, unless adorned

with various kinds of domestic animals of *high-bred* race. Even the most powerful potentates do not consider such things as beneath their attention. We have seen high-bred cattle, petted and cared for with the greatest attention by the Emperor Nicholas, of Russia, in his superb park, at the Sarskosella, his favorite summer residence. Prince Albert and the Queen of England possess them in great variety, at Windsor Park, and even at their marine residence, at Osborn House, on the Isle of Wight; and what is most strange to American eyes, is to see herds of noble shorthorns, and flocks of Southdown and Leicester sheep, pasturing in the parks of populous London, greatly to the delight of its numerous citizens, and evidently at as much ease as if on one of the most retired farms of the kingdom. Breeding and rearing fine high-bred stock is the heartfelt delight of English people; and we can add, also, one of their most profitable occupations; for they not only derive vast benefit from it themselves, but they make the whole world tributary to them in the way of purchasing.

The first thing with us, after obtaining possession of land, would be to stock it with improved animals; the second, to plant choice trees and flowers; the third, to erect a handsome house; and the fourth and last, elegantly furnish it, especially with a well-selected library. Usually all this is reversed with our countrymen. First comes a great, staring, ill-constructed temple of a house; second, gaudy furniture; third, a gravelled path or two and a few trees or flowers; fourth, stowed away in an old shed or secluded pasture, some three or four mean, slab-sided, coarse, raw-boned cows, whose only merit is giving a big mess of watery milk! Not a chick, not a rabbit, not a pet lamb, not even a musical bossy calf, frolicking colt, nor dappled fawn, sets foot on their ground; they have no taste for such; and, besides, they are dreadful 'fraid it would be *vulgar*. Thus all about them is in a measure uninhabited and desolate. We have occasionally known the boys to rob their nests, and then stone away or shoot every bird that made its appearance on their ground. But, for the honor of our countrymen, we will add that this is very rare. Nine tenths of those who are seen prowling about the pastures, woods, and fields, in the vicinity of our large cities, are foreigners.

LARGE STRAWBERRIES.—We do not know when we have been more gratified, than by a present from Mr. Matthews, of several quarts of the largest and finest kinds of strawberries, grown by him in the garden at High Cliff. Some of these were $5\frac{1}{2}$ inches in circumference, and of a delicious flavor. He has succeeded in growing the Prince Albert, and Keen's seedling, with the same success as the Hovey. He plants every third row among them, with early scarlet. By this method, and general judicious cultivation, he gets abundant crops, and of large size. He showed us Prince Alberts, from $4\frac{1}{2}$ to 5 inches in circumference.

Ladies' Department.

SOUTHERN RECIPE FOR OKRA SOUP.

VERY early in the morning, set the pot over the fire with a shin of beef, washed and picked clean, and ten quarts of cold water; add a table-spoonful of salt. When it boils, draw it from the fire, and carefully take off the scum. If the scum should sink, it must be strained through a cloth that has been washed in scalding water to remove the unpleasant taste, a cloth is apt to communicate to hot liquids which pass through them. While the soup is boiling, throw in a peck of okra cut in slices, and three or four small onions. About an hour afterwards, add two quarts of tomatoes peeled, and cut in slices, throwing out the seeds. Season with pepper, and such herbs as suit your taste. Let it boil slowly until dinner time. Pick the bones and meat carefully out; cut up some of the gristle in short pieces, and return them to the soup; and then throw a few leaves of fresh parsley on it, after it is in the tureen. M.

WASHING MADE EASY.—Do not be humbugged out of a dollar for anything with this title. Here is the whole secret from an English paper:—Dissolve $\frac{1}{4}$ lb. of lime, in boiling water, straining twice through a flannel bag; dissolve separately, $\frac{1}{4}$ lb. of brown soap and $\frac{1}{4}$ lb. of soda; boil the three together. Put six gallons of water into the boiler, and when boiling, add the mixture. The linens, which must have been steeped in cold water for twelve hours, are wrung out, the stains rubbed with soap, and put into the boiler, where they must boil for thirty-five minutes. They are then drawn, (the liquor being preserved, as it can be used three times,) placed in a tub, and clear boiling water poured over them. Rub them out, rinse them well in cold water, and they will be ready for drying.

CORN BREAD.—Readers never tire of recipes for something good to eat. Here are two for corn bread worth trying:—

Mix three pints of Indian meal in a quart of sour milk; add three eggs, a tea-spoonful saleratus, and some salt; beat all to a smooth batter, and pour in pans half an inch deep, and bake quick. This is a sufficient breakfast for half a dozen.

Here is one for family bread:—Six quarts of water, one pint of lard, one pint of yeast, and a tea-cupful of salt, mixed with meal enough to make a batter. Let it rise and then put in pans to bake.

TO PREPARE BEES' WAX.—To obtain wax, boil the combs in a strong muslin bag, in a saucepan, with water sufficient to keep the bag from burning; and whilst boiling, continue to press the bag with a wooden slice or spoon, to extract the whole, as you skim off the wax. Drop the wax into cold water, where it will swim on the surface. The wax thus obtained will still want refining, to effect which, place it in a clean

saucepan, and melt it over a slow fire. Then pour off the clear wax into proper vessels, and let it cool. To whiten it, make it in thin cakes, and expose it in the sun.

SPONGE CAKE.—Take six eggs; two tea-cupfuls of sugar; one and a half of flour; and one tea-spoonful of cream of tartar; one tea-spoonful of soda; and one tea-spoonful of essence of lemon or nutmeg. Beat the whites of the eggs till very light, mix the yolks with sugar, and add the whites gradually to the yolks and sugar. Mix the soda and cream of tartar with the flour, add the former mixture, and add the essence of lemon or nutmeg. The whole should be stirred slowly till the top of the mixture is covered with bubbles. Bake in a quick oven. It is eatable, you may depend upon it.—*Prairie Farmer*.

SWEET BACON.—This may be a little more difficult, but there is not much risk if salted immediately, and well rubbed in, first adding a table-spoonful of sugar and a tea-spoonful of saltpetre to each ham, using about six pounds of salt to 100 lbs. of meat. Do not make smoke with rotten wood nor old chunks. See that the servant who has charge of it, never uses anything but sound green wood—hickory, maple, ash, or elm. Some use cobs. We cannot recommend them. Let the smoke house be open and do not try to smoke too fast.

TO PREVENT DAMPNES IN WALLS.—Use a paint made of one part bees' wax, three parts boiled linseed oil, and one tenth part of litharge, put on hot. The wall should be entirely dry, and, if possible, heated. Three or four coats will render a stone or brick wall impervious to moisture.

TO PRESERVE CUT FLOWERS FRESH.—Add a pinch of nitrate of soda, or nitrate of potash. (saltpetre,) to a tumbler of water, every time you change the water.

CHARCOAL IN CISTERNS.—Two gallons of fine charcoal will purify a dozen hogsheads of water, when the smell is so unpleasant it cannot be used.

CEMENT FOR ALABASTER.—Make a paste of white of egg and finely-powdered quicklime; or else take a little newly-baked and powdered plaster of Paris, and wet it slightly, and use immediately.

SWEET LARD.—To have this at all times, let the pork be cut up just as soon after killing as you please—render it without water, and be sure you cook it till well done; pack it in stone jars, or sweet oak tubs.

TO CLEAN MARBLE MANTLES.—Dip a woolen cloth in a weak solution of carbonate of soda.

RED ANTS, can be kept out of closets and other places by impregnating the air with camphor, as this odor is offensive to all the insect family.

Foreign Agricultural News.

By the steamer Atlantic, we are in receipt of our foreign journals, to the 10th of July.

Markets.—Ashes, firm, at an advance of one shilling. Cotton, an advance of $\frac{1}{4}$ d. per lb., with large sales. Corn, 6d. to 1s. higher per quarter. Provisions, a little lower, with the exception of bacon. Lard, an advance of 6d. per 100 lbs. Naval Stores, and other American products, no change.

Guano Water.—Half a pint of guano dissolved in 6 or 8 gallons of water, and applied as circumstances require, has been found of service to many kinds of flowers.—*Gardeners' Chronicle*.

To Keep Flies out of the House.—Stretch threads across the windows, at the distance of a quarter of an inch. Flies will not pass them readily.—*Ibid*.

Poultry Management.—My poultry are of the same sort as may be found in any of the neighboring farmyards; the eggs of the largest and best hens have been selected for sitting, so that the stock consists of birds capable of covering 15 eggs, which is the largest number I ever placed under a hen. The cocks are changed every two years, taking care to supply their place with fine, healthy birds of the previous year. Hens are useless after the third year; my plan is, in a stock of, say 30 hens, to introduce 10 young pullets every year, and part with ten of the oldest hens. One male bird must be kept to every seven hens; but when more than fifty hens are kept, one to every six is necessary. On the proportion of male birds kept, depends, I am confident, the number, as well as the successful fecundation of the eggs. About a month since, as an experiment, I placed 13 eggs, which I had procured from a farmyard where the proportion of male to female birds is about 1 to 15, under a hen and mark the result. From 13 eggs were produced three chickens; seven of the eggs, at the end of three weeks, were almost as fresh as when just laid, and three were addled.—*Correspondent in Agricultural Gazette*.

Mr. Huxtable's Mode of Saving Manure.—The sheep, pigs, and cattle on the farm of Mr. Huxtable, at Waldron, stand, for the most part, on board floors. The framework on which they stand is made of spars, with interstices half an inch wide, through which liquids pass with ease. The said flooring, however, must be perfectly level, and raised 6 inches from the water-tight brick or stone flooring below, the under part being inclined to the drain communicating with the tanks. The space below the floors admits of room for a scraper like a gardener's hoe, used in cleansing out any manure that falls through between the interstices of the spars. Each wooden spar must be 2½ inches wide, and 1½ thick. Still, cattle cannot well do without a little straw spread on the boards; much less, however, suffices, than when they stand on a brick or stone basement.—*Gardeners' Chronicle*.

Roots Choking Drains.—In a recent case, where some poplar and larch trees stood about 16 to 18 feet from the line of a main drain, laid through a field, it was found that in two years the drain had become choked with roots, and it is believed that in many instances, where drainage has not produced, those improvements in land which were anticipated, and even where hedgerows cross or adjoin any portion of a main drain, the cause may be an obstruction of this nature. In the case quoted, however, the precaution of placing vertical pipes at the junction of each of the parallel drains with the main, aided greatly in pointing out the cause. The drains in this case are said to have been made of horse-shoe tiles, well laid, and fitting closely at the joints.—*Builder*.

Death of Mr. Smith, of Deanston.—We regret to announce the sudden death of James Smith, of Deanston, the eminent agriculturist. He was found dead in his bed in the 10th of June. He was acknowledged to have been the inventor and chief promoter of the modern system of thorough drainage; that is, the drainage through the land by pipe drains, instead of over the land by surface drains. More recently, he had been engaged as one of the superintending inspectors of the General Board of Health, by whom his exertions were more especially directed to the application of the sewerage water, and refuse of towns, to agricultural production. He was noted for his fertility of invention, and a very high order of talent. He was personally highly esteemed by those who served with him, and by whom he will be greatly lamented.—*Condensed from the Times*.

Cotton Cultivation in India.—Mr. Bright lately, moved in the British House of Commons, for an address to the crown, praying her Majesty to appoint a commission for the purpose of proceeding to India, to inquire into the obstacles which prevent an increased growth of cotton in that country, and to report upon any circumstances which may injuriously affect the economical and industrial condition of the native population, being cultivators of the soil, within the presidencies of Bombay and Madras. He said that his constituents were agreed upon the propriety of his motion, and that Manchester was convinced that the prosperity of its trade was intimately connected with this question. The cotton trade employed nearly 2,000,000 of the population, and had a greater capital engaged in it than any other trade in the United Kingdom; therefore, it was of the utmost national importance to have the raw material for this extensive manufacture, obtainable, if possible, from their own colonies. He contended that the East Indies was peculiarly well qualified for the growth of cotton, and that a judicious cultivation of it in that empire would confer immense advantages on India, as well as on Great Britain, and all her dependencies.

Dissolving Bones by Sulphuric Acid.—Various quantities of acid have been named as the proper quantity. If the bones are to be completely decomposed, half their weight in acid will be required; but we do not think it advisable to complete their decomposition, as a portion is then left for the following crop; at the same time, a sufficient quantity of the bones being rendered soluble for the wants of the present crop.

Our method of dissolving bones, is as follows:—We do not give it as being better than other methods, only that we have found it to answer the best.

Into a tub or cistern, place a quantity of crushed bones, the weight having been previously ascertained; level them, and add sufficient water to cover them one inch deep, adding sulphuric acid to the amount of half the weight of bones, stirring the mixture occasionally, for 36 hours. If the acid is good, and the bones free from chalk, the whole will have become a thick fluid by that time. This is the best method when it is intended to apply manure or other tillages for the wheat and seeds; but if it is intended to carry out through a whole course of cropping, a fourth of the weight of bones in acid is sufficient, as it only decomposes a portion of the bones for the immediate food of the first crop, and leaves the other portion for the assimilation of the following crops as required. The decomposed bones are then mixed with sawdust, ashes, or other materials that will pass through the drill.

Some persons add large quantities of water, and apply it in a liquid state; the great objection to this is, the extra labor required, and the uncertainty of its even application.—*Farmer's Herald*.

Editors' Table.

THE SOUTHERN PICTORIAL ALMANAC.—This is the title of a handsomely got up work, of 40 pages, edited by a seemingly new candidate to Almanac fame, and a totally unknown personage to us, ycleped in the title page, "Uncle Solon," and published by A. B. Allen & Co., of New York. Of these latter gentlemen we suppose the southern public have occasionally heard, though not exactly in their present line as "publishers." [We wonder if they have any intention of rivalling the Harpers? If so, we shall advise our Cliff-street friends to keep a sharp lookout to windward, as Captain Reviewer would say.] But as to "Uncle Solon," we know nothing at all about him, and we expect he will prove a second Junius, or may be, a resurrection of the Iron Mask, at least till every man and "boy," south of Mason and Dixon's line, take his Almanac in hand, and commence "reckoning" over his incognito. Whether he will then be discovered, we cannot say; yet, this much we opine, that one and all will have many a hearty laugh over the quaint sayings of the aforesaid "unknown," and the racy dialogues of his dramatis personæ—nor will they find a large fund of useful information forgotten in his pages—and such weather as *is weather*, foretold them, for every day in the year, with marvellous exactness. The meridian of Charleston is used for the calendars of this Almanac; and, in fact, it is pure, unadulterated southern, throughout, with none of your piebald mixtures from the north. This work offers an excellent medium for advertising. We will give one page of advertisements to any person desiring it, and furnish the Almanac, at \$15 per thousand. This is very low for a work so useful, humorous, and handsomely embellished and printed.

THE NORTHERN ALMANAC is got up, edited, and published the same as the above, calculated for all the northern and western states. Orders, respectfully solicited.

THE FARMER'S EVERY-DAY BOOK; or, Sketches of Social Life in the Country, with the Popular Elements of Practical and Theoretical Agriculture, and 1,200 Laconics and Apothegms relating to Ethics, Religion, and General Literature; also, 500 Receipts on Hygeian, Domestic and Rural Economy. By the Rev. John L. Blake. Auburn, N. Y. Derby, Miller & Co., pp. 654, octavo. Price \$3. From a hasty examination of this volume, and the reputation of the author, we should judge that it is a pleasing book, well suited for family reading.

AMERICAN POMOLOGICAL CONGRESS.—In conformity with the resolutions passed at the last session of this National Institution, its next meeting will be held in the city of Cincinnati, Ohio, on the 11th, 12th, and 13th days of September next, 1850. The Ohio State Board of Agriculture, and the Cincinnati Horticultural Society will also hold their annual exhibitions at the same time and place, and the latter have generously offered to provide for the accommodation of the congress. All agricultural, horticultural, pomological, and kindred societies in the United States and the Canadas are hereby respectfully invited to send such number of delegates as they may deem expedient.

Packages of fruit, not accompanied by its proprietor, may be addressed to the care of Messrs, John F. Dair & Co., Lower Market street, Cincinnati, Ohio. These should be very distinctly marked "For the American Pomological Congress."

LARGE FLEECES.—Mr. L. G. Collins writes us, under date of June 10th, "My improved Merino ram, sheared 17 lbs., and my yearlings, from 11 to 14½ lbs., unwashed wool, which sold readily at 27 cents per pound."

THE JOURNAL OF THE NEW-YORK STATE AGRICULTURAL SOCIETY.—The Executive Committee of the New-York State Agricultural Society have long felt the necessity of some channel of communication, through which the proceedings of their monthly meetings could be fully given to the public. The space which has been liberally afforded them in the daily journals of this city, they duly appreciate, but the increase of the correspondence, and business of the society require much more room than they have any right to ask or expect from any of the daily papers of the city. They have decided to issue monthly, a journal of their proceedings, in which will be contained the proceedings of the society and the executive committee, and such communications and articles of interest as are from time to time received. They will be enabled in this way to give much more fully than heretofore, matters interesting to farmers, which come before them, and to obtain by this means more extended circulation among all classes of community. The journal will be forwarded to the officers and correspondents of the society, state and county societies, to the agricultural papers, and such other papers as may desire an exchange, on application to B. P. Johnson, Secretary of the Society, Albany, N. Y.

IMPROVED STOCK FOR NOVA SCOTIA.—In the month of June last, we had the pleasure of a call from James Irons, Esq., Secretary of the Nova-Scotia Agricultural Society. He was sent by this society, to the United States, for the purpose of procuring improved stock, farming implements, plants, seeds, &c. Of the former, he selected one Ayrshire bull and three heifers, from Mr. Prentice, of Albany, N. Y., one Hereford bull and one heifer from Mr. Corning, of the same place, and one Devon bull of Mr. Buckminster, of Boston, Mass. He represents them all as fine animals of their kind. Mr. Irons looked over Mr. Sheafe's stock of shorthorns, at New Hamburg, and was much pleased with them. He would have purchased some of these, but in justice to the public, after advertising them for sale, at auction, we could not withdraw anything from the herd. Mr. I. also purchased fourteen head of pigs, of the Suffolk and Essex breeds, of Mr. Stickney, of Boston, Mass.; and at different conservatories, greenhouse plants, &c. We are always much pleased to welcome intelligent strangers among us, more especially when they come here with the object of Mr. Irons. We trust the stock will do well, and that the members of the Nova-Scotia Society, may find great benefit from the introduction of the above fine animals, &c., among them.

THE LONG MOSS, that covers the forests of the south, has lately been applied to the manufacture of cotton bagging, by a process of preparation discovered by Colonel Moseley, of Mississippi. We have often wondered that this strong, fibrous plant has not been put to some use besides stuffing mattresses and cushions, before this time. We hope this new application of such an abundant material may prove successful.

ANOTHER NEW VARIETY OF POULTRY.—A bird nearly equalling the turkey in size and quality of flesh has lately been introduced from South America, called the curassow. We understand Mr. Colt, of Paterson, has some. They have been domesticated heretofore in Europe, but with what success, we are not informed.

PINE APPLES IN FLORIDA.—The cultivation of the pine apple has been commenced in Florida; and, with a little protection occasionally in winter, it is believed this delicious fruit can be raised in that state in abundance.

SULPHUR ON ONION PLANTS, it is said, will kill, or expel the little troublesome maggot.

Review of the Market.

PRICES CURRENT IN NEW YORK, JULY 20, 1850.

ASHES, Pot.,.....	100 lbs.	\$6 00	@	\$6 06
Pearl,.....	do.	6 00	"	6 12
BALE ROPE,.....	lb.	9	"	11
BARK, Quercitron,.....	ton.	39 00	"	41 00
BEANS, White,.....	bushel.	75	"	1 25
BEESWAX, American, Yellow,.....	lb.	20	"	26
BOLT ROPE,.....	"	10	"	11
BONES, Ground,.....	bushel.	45	"	55
BRISTLES, American,.....	lb.	25	"	65
BUTTER, Table,.....	"	15	"	25
Shipping,.....	"	9	"	15
CANDLES, Mould, Tallow,.....	"	10	"	13
Sperm,.....	"	25	"	47
Stearine,.....	"	25	"	30
CHEESE,.....	"	5	"	10
COAL, Anthracite,.....	2,000 lbs.	5 00	"	6 00
CORDAGE, American,.....	lb.	11	"	13
COTTON,.....	"	10	"	15
COTTON BAGGING, Am. hemp,.....	yard.	15	"	16
FEATHERS,.....	lb.	30	"	40
FLAX, American,.....	"	8	"	9
FLOUR, Ordinary,.....	bbl.	4 25	"	5 75
Fancy,.....	"	6 00	"	6 50
Richmond City Mills,.....	"	6 50	"	6 75
Buckwheat,.....	"	—	"	—
Rye,.....	"	2 75	"	3 00
GRAIN—Wheat, Western,.....	bushel.	1 00	"	1 50
Red and Mixed,.....	"	90	"	1 15
Rye,.....	"	62	"	64
Corn, Northern,.....	"	62	"	65
Southern,.....	"	59	"	63
Barley,.....	"	60	"	65
Oats,.....	"	42	"	50
GUANO, Peruvian,.....	2,000 lbs.	50 00	"	50 00
Patagonian,.....	do.	34 00	"	35 00
HAY, in Bales,.....	100 lbs.	65	"	70
HEMP, Russia, Clean,.....	ton.	210 00	"	215 00
American, Water-rotted,.....	"	160 00	"	200 00
Dew-rotted,.....	"	140 00	"	175 00
HIDES, Southern, Dry,.....	"	9	"	10½
HOPS,.....	lb.	6	"	18
HORNS,.....	100.	2 00	"	10 00
LEAD, Pig,.....	100 lbs.	4 38	"	4 75
Pipes for Pumps, &c.,.....	lb.	5	"	7
MEAL, Corn,.....	bbl.	2 75	"	3 25
MOLASSES, New-Orleans,.....	gallon.	23	"	30
MUSTARD, American,.....	lb.	7	"	10
NAVAL STORES—Turp.,.....	bbl.	1 50	"	1 75
Pitch,.....	"	1 25	"	1 75
Rosin,.....	"	1 25	"	1 30
Turpentine,.....	"	2 44	"	2 75
Spirits of Turpentine,.....	gallon.	30	"	33
OIL, Linseed, American,.....	"	73	"	77
Castor,.....	"	1 65	"	1 75
Lard,.....	"	58	"	65
OIL CAKE,.....	100 lbs.	1 25	"	1 50
PEAS, Field,.....	bushel.	75	"	1 25
Black-eyed,.....	"	2 00	"	2 25
PLASTER OF PARIS,.....	ton.	2 00	"	2 75
Ground, in Barrels of 300 lbs.,.....	"	1 12	"	1 25
PROVISIONS—Beef, Mess,.....	bbl.	8 50	"	11 00
Prime,.....	"	5 25	"	8 00
Smoked,.....	lb.	6	"	12
Rounds, in Pickle,.....	"	4	"	6
Pork, Mess,.....	bbl.	10 00	"	12 00
Prime,.....	"	6 50	"	10 00
Lard,.....	lb.	6	"	7
Bacon Sides, Smoked,.....	"	3	"	4½
in Pickle,.....	"	3	"	4
Hams, Smoked,.....	"	5	"	9
Pickled,.....	"	4	"	7
Shoulders, Smoked,.....	"	4	"	6
Pickled,.....	"	3	"	5
RICE,.....	100 lbs.	2 25	"	3 75
SALT,.....	sack.	95	"	2 00
Common,.....	bushel.	20	"	35
SEEDS—Clover,.....	lb.	6	"	9
Timothy,.....	bushel.	2 00	"	3 50
Flax, Clean,.....	"	1 60	"	1 65
SODA, Ash, (80 per cent. soda),.....	lb.	3	"	—
Sulphate Soda, Ground,.....	"	1	"	—
SUGAR, New-Orleans,.....	"	4	"	6
SUMACH, American,.....	ton.	35 00	"	37 00
TALLOW,.....	lb.	6	"	7
TOBACCO,.....	"	3	"	11
Eastern, Seed-leaf,.....	"	15	"	20
Florida Wrappers,.....	"	15	"	63
WHISKEY, American,.....	gallon.	25	"	26
WOOLS, Saxony,.....	lb.	40	"	60
Merino,.....	"	35	"	40
Grade Merino,.....	"	30	"	35
Common,.....	"	20	"	30

NEW-YORK CATTLE MARKET.

At Market.—70 cows and calves, and 6,000 sheep and lambs. Owing to the holiday of Saturday, no beef cattle were driven to market, and consequently there was no business done at the drove yard to-day.

Cows and Calves.—All in market were taken at prices ranging as in quality, from \$20 to \$47.

Sheep and Lambs.—All offered were taken at \$2.50 to \$7 for sheep, and \$2 to \$4 for lambs. The market closed quite brisk. July 15.

REMARKS.—This is a very dull business month, and we have nothing of the slightest interest to note in the market.

The Weather has been very sultry, with a destructive rain storm on the morning of the 19th. Crops and trees innumerable, almost, were blown down, and much other damage done. The hay crop is bountifully large. Wheat and other small grain have come in better than was anticipated two months ago; at the south, considerable suffering from the rust. Corn is growing with great rapidity, and is now a highly promising crop. Potatoes, and other roots the same. Cotton, Sugar, Rice, and Tobacco are doing fairly.

TO CORRESPONDENTS.—Communications have been received from L. Durand, M.; A. E. Ernest, E. Cornell, Thomas B. Coursey.

ACKNOWLEDGMENTS.—Revue Horticole from Paris; A Brief Historical, Statistical, and Descriptive Review of East Tennessee, in the United States of America, developing its Agricultural, Mining, and Manufacturing Advantages. By J. Gray Smith, a naturalised citizen, London, 1843; Transactions of the Michigan State Agricultural Society, with Reports of County Agricultural Societies, for the year 1849.

OUR AGENT AT BOONVILLE.—We wish to say to the gentlemen in Missouri, that the efforts of Mr. Oglesby, in behalf of the Agriculturist, are entirely voluntary, and without fee or reward of any kind whatever. We have frequently pressed him to take the usual commissions allowed agents, in obtaining subscriptions for our paper; but this he invariably refused, saying that he could not do such work for money; the hope of benefitting agriculture and his fellow planters, must be his reward for all such exertions. We bespeak for Mr. Oglesby, the confidence of the gentlemen of his state.

NEW-ORLEANS AGRICULTURAL Ware house, comprising a large assortment of Plows, Harrows, Cultivators, Fanning Mills, Corn Shellers, Corn and Cob Crushers, Straw Cutters, Ox Shovels, Ox Yokes, Grain Threshers, Corn Mills, Axes, Hoes, Shovels, and other Agricultural Implements. Also, Gardening Tools, Guano, Plaster, Rock Salt, &c. &c. Orders will be executed for every article wanted by Planters. Jn tf GEO. W. SIZER, cor. of Magazine and Poydras sts.

CHARLESTON HOTEL.—This extensive house is now prepared to offer as good accommodations to gentlemen and ladies as any other in the city. D. MIXER. apr 5*

"I pronounce the Charleston Hotel, one of the best between New York and New Orleans." SOLON ROBINSON.

ANALYSIS OF SOILS.—Dr. Antisell has removed his laboratory to 35 City-Hall Place, where he continues to carry on analyses of Soils, Manures, and other Agricultural Substances, and to give opinions on same. Fee for analysis of soils, \$5. A class is formed for instruction in chemistry, and mode of conducting analyses. There is a vacancy for a few pupils. Terms \$15 for three months.

PATENT WIRE RAILING, of every variety of Style and Design, from ½ in. to 1 in. diameter, for Enclosures Farms, Public Grounds, Cemeteries, Cottages, and Gardens, Window Shutters, and Grounds for Private Dwellings, Lunatic Asylums, Prisons, Summer Houses, Arbors, Arches, and Verandahs, Gratings for Sky Lights, Guards for Steamboats, &c. Manufactured by T. Lyman & Co., 4 Albany Block, Boston, and G. W. Phipps & Co., Grove Street, New Haven, Ct., sole patentees for the New-England States. For further particulars, address, post paid, A. B. ALLEN & Co., jy 189 and 191 Water st. N. Y.

NEW-OXFORDSHIRE LONG-WOOLED Bucks for sale.—The subscriber has about 40 Long-wooled Bucks, which he will dispose of at any time when called for. This flock, which has been bred from some of the best ever imported, is so well known that they need no further description than to say that they continue to yield their very heavy fleeces—from 9 to 16 lbs. of washed wool; and when full fatted, will weigh upwards of 300 lbs., alive. This breed of sheep is remarkably healthy, very prolific, and make a profitable cross with the various breeds of this country, doubling their weight of wool and mutton. The price will be from \$50 to \$75 for Bucks, and \$25 to \$30 for Ewes, according to their quality. Gentlemen are invited to call and see for themselves, or communicate by mail. jy 4t CLAYTON B. REYBOLD, Delaware City, Del.

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One of the finest trout streams of the island runs through this land, and in the north parts of the tract, is the famous Ronkonkoma Pond, or Lake, one of the most beautiful sheets of water that can be found anywhere, of about three miles in circuit, the shores and banks of which are pleasant and picturesque in a high degree.

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“ “ “ 500 “	\$135.
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“ “ “ 150 “	\$70.
“ “ “ 200 “	\$80.
“ “ “ 300 “	\$105.

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GRASS SEEDS.—Ray Grass, Lucern, and White Dutch Clover Seeds.

GARDEN SEEDS.—A large stock selected with care, expressly for the American Market.

ALLEN'S IMPROVED PORTABLE RAIL-road Horse Power, Thresher, and Separator.—The advantages of the above horse powers are—1. They occupy but little more space than a horse. 2. They can be moved by the weight of the horse only, by placing the machine at an angle of 10 or 15 degrees. 3. They are easily transported, simply constructed, not liable to get out of order, and move with little friction.

The *Overshot Threshers* consist of a small-spiked cylinder with a concave top, and possess these advantages. 1. They have a level table for feeding, thus enabling the tenders to stand erect, and control the motions of the horse and machine by means of a brake, by which accidents are avoided. 2. In consequence of the spikes lifting the straw and doing the work on the top, stones, blocks, &c., drop at the end of the table, and are not carried between the spikes. 3. The overshot cylinder does not scatter the grain but throws it within three feet of the machine. 4. This arrangement also admits of attaching a *separator* high enough from the floor or ground to allow all the grain to fall through it, while the straw is deposited by itself in the best condition for binding. 5. Neither grain nor straw are broken by this machine. 6. The cylinder is long, which admits of faster and more advantageous feeding; it is smaller and with fewer teeth than ordinary threshers, thus admitting of more rapid motion and faster work with less power; and the diminution of teeth in the cylinder is fully made up by an increased number in the concave top, which is stationary. 7. The separator is a great advantage in diminishing the labor of raking out the straw, as it leaves the grain in the best condition for the fanning mill. Three men with a single power, can thresh 100 to 150 bushels of wheat or rye per day; and four men with a double power, twice that quantity. All the above are compact and can be carried where wanted, complete, or they may be readily taken apart and packed for distant transportation by wagon or otherwise.

Price of single Power,	\$80
“ “ Thresher,	\$28
“ Separator and fixtures,	\$7
“ Bands for driving, etc.,	\$5
“ Wood-sawing machine, complete, and in running order,	\$35
Price of Double Power,	\$100
“ with Thresher, Separator, &c.,	\$145 to \$150

All the above are sold singly or together, as desired, and are warranted to work well and give satisfaction.

A. B. ALLEN & CO., 189 and 191 Water st., N. Y.

CULTIVATORS—of at least a dozen of the most approved kinds.

BRICK MACHINES of the best construction, will make 10,000 to 15,000 bricks per day by hand.

GRAIN MILLS.—Steel and Cast-Iron Mills at \$6 to \$25, and Burr-Stone at \$75 to \$250, for Horse or Steam Power.

CHURNS.—Rotary and Thermometer Churns, and Self-acting Cheese Presses.

GRINDSTONES on Friction Rollers, requiring one person only to hold and turn.

SAWING MACHINES, for cross cutting cord wood, or splitting Scantling, Plank, or Boards.

ROCK SALT, a valuable article for stock, which does not waste by exposure in the field.

PUMPS.—Suction and Forcing Pumps of all sizes with pipe, at lowest manufacturers' prices.

CORN AND COB CRUSHERS, of different varieties, efficient and durable both for hand and horse power.

GREAT SALE OF SHORTHORN CATTLE.

The subscriber will offer for sale, without reserve, at public auction, on Thursday, the 29th day of August next, at 1 o'clock, P. M., on the farm of J. F. Shenfe, Esq., at New Hamburg, Dutchess Co., New York, about 35 head of Shorthorn cattle, including cows, heifers, and calves.

This herd was mostly bred by Mr. Shenfe, and I do not hesitate to say, that I think it *one of the very best* in the United States; and I have seen and particularly examined nearly all of them. Great attention was paid in the commencement of this herd, to the milking properties of the animals forming it; and this, together with fine points and good growth and constitution, have been steadily kept in view in its breeding. There is but one cow in the herd which gives less than 20 quarts per day, in the best of the milking season, while one has given over 29 quarts per day and made 15 lbs. 3 oz. of butter per week, and two others have given respectively, 31 and 36 quarts per day. Their color is of the most fashionable and desirable kind—red, red and white, and a rich strawberry roan—only one white cow in the lot. They are of good size and fine style, and all in calf to the superb imported bull Exeter, which will also be offered for sale at the same time.

Pedigree of Exeter.—Exeter is of the Princess tribe of Shorthorns—was culved in June 1848, and bred by Mr. John Stephenson, of Wolviston, Durham, England. He was got by Napier, (6,238,)—out of Jessamine, by Commodore (3,452)—Flora, by Belvedere, (1,706)—Jessey, by Belvedere, (1,706,)—Cherry by Waterloo, (2,816,) &c. See English Herd Book, Vol. V., for full pedigree.

Exeter was selected for Mr. Shenfe, by a first-rate judge of shorthorn stock, and was considered one of the *very best bulls* in England. Quite a high price was paid for him; and it is believed that his superior, if even his equal, has never before been imported into this country. He carries an enormous brisket for his age, and his style, handling, and quality are of the finest kind. His color is mostly a beautiful yellow-red, which is a bright-red with a fine golden or saffron undertinge, arising from a rich yellow skin. He is the *only bull of this peculiarly desirable red*, ever imported into America. Calves got by him, out of this herd of cows will fetch a high price the moment they are dropped.

Mr. Stephenson, the breeder of Exeter, now stands at the head of his class in England, and his stock is of the highest repute. It is entirely of the Princess tribe, and traces its pedigrees without any alloy or Galloway blood, back to pure shorthorns, for upwards of two hundred years; a matter of no small consideration to those who wish a *superior fresh cross*.

Catalogues of the above stock, with pedigrees in full, are now ready for distribution.

Southdown Sheep.—A choice flock of this superior breed of mutton sheep will be sold on the same day as above.

Suffolk Swine.—One boar and several breeding sows and pigs, of this fine breed of swine.

Working Oxen.—A handsome pair of red working oxen.

A. B. ALLEN, 189 Water st., New York.